THE BUILDER

INCORPORATING

"ARCHITECTURE" and "THE BRITISH ARCHITECT"

VOL. CLXXVII SEPTEMBER 2, 1949 No. 5559

THIS WEEK'S NEWS

PAGE

AN INTERESTING EXPERIMENT in the daylighting of school classrooms is being carried out at the Lascelles School, Harrow, under the direction of Mr. C. G. Stillman, F.R.I.B.A., Middlesex County Architect. The experiment incorporates the admission of daylight through a continuous, corrugated Perspex roof light, under which are adjustable aluminium louvres to eliminate glare by interrupting direct sunlight. 287

SOME OF THE PRINCIPLES to be observed in the preparation and presentation of planning maps to the Ministry of Town and Country Planning, local authorities and the public were described by Dr. E. C. Willatts and Mr. D. R. Childs in a paper read at the Town Planning Summer School. 295

THE STEPS being taken in Bristol to carry out a comprehensive survey for the preparation of a development plan for the city were described at the Town Planning Summer School by Mr. R. W. Jefford, Deputy City Planning Officer. 296

THIS WEEK'S ARTICLE in the series on the organisation of building firms describes the administrative structure of a Midlands city firm employing 50 to 75 men. 298

A SERIES OF LECTURES on prestressed concrete is to be given in the National Hall Gallery Lecture Room, Olympia, during the Building Exhibition in November. 302

TENDERS ARE INVITED by the Director-General, Department of Works and Housing, Melbourne, Victoria, Australia, for the supply and erection of 1,000 single-storey pre-cut or prefabricated houses. 305

THE ENGINEER AS MASTER PLANNER

WE in England are perhaps too prone to think that the modern art or science of town planning originated in this country. There is some justification for that belief, and in fact the first International Conference on Town Planning was held in London in 1910, though the most striking exhibits on that occasion were the magnificent perspective views of Washington. Since 1910, however, enormous strides have been made in the United States. Mr. Nelson Lewis, father of the author of a monumental new book* on *Planning the Modern City*, was the first Chief Engineer of the Board of Estimate and Apportionment of New York, and in 1916 he published a volume bearing a similar title which has been widely used by English town planners. A generation has since elapsed, and during that period the advance has been so phenomenal that Nelson Lewis's work has become almost obsolete. His son has therefore "completely reorganised and rewritten the book on a much larger scale, in two handsome and well-illustrated volumes. As a young man, he himself took some share in preparing his father's manual; then, after his discharge from the U.S. Army in 1919, he served as Executive Engineer for the Regional Plan of Greater New York from 1921 to 1932, when he became Chief Engineer and Planning Consultant for the Region. With true filial piety he has "retained the original author's philosophy or approach to the subject," and bases his treatment of it "on the premise that planning urban areas is, in the final analysis, an engineering problem, although it necessarily involves the collaboration of specialists from various fields." In England, on the other hand, architects have figured most prominently hitherto as pioneers and practitioners of town planning, but it may be remembered that Raymond Unwin was trained as an engineer.

Mr. Harold Lewis treats city planning under six main heads: basic information, or preliminary survey of the existing sociological and other conditions of the city; communications; planning for land-use, including public open spaces, parkways and national parks; neighbourhood and community planning, including the treatment of "blighted" areas; special problems including airports, parking-places, and suburban "sprawl"; legal, economic, and administrative problems, including finance. Thus he covers the ground thoroughly, with one notable exception: there is no mention of "Civic Art" as such, though there is a good chapter on civic centres with many illustrations. This omission is, he tells us, intentional, as the information is easily accessible in other books. It is significant that he concludes the work with a final claim for the civil engineer as the master planner, adding that he has "an æsthetic responsibility and should see that the structures he designs are as pleasing to look at as they are efficient in serving the special purposes for which they are designed." He should therefore seek co-operation with other professions "that deal more directly with art"; but the author also observes that "many engineering schools have recently recognised that the young civil engineer should at least be exposed to some elementary training in architecture and city planning." He repeats that architects and others have often shown "the keenest interest in city planning . . . while engineers have seemed to be content to carry out the physical work of city building along lines already laid down. . . . However important may be the position of the architect in making a city dignified and beautiful, the general city plan will have been made before he appears upon the scene"; yet "too often the eyes of the municipal engineer have been so closely fixed upon the drawing-board that he has seldom looked up to catch a vision of the great city that is to come."

Although the author is concerned with the principles and practice of city planning in general, his examples are mainly drawn from the United States. Of some 300 excellent illustrations (excluding diagrams of ideal types) about four-fifths are divided between Greater New York and other American cities, whereas only about 40 picture European schemes and plans—new and old. This is no drawback to an English student, who can find plentiful illustrations elsewhere of European examples; besides, America has much to teach us. We may envy such splendid and gigantic achievements as the Triborough Bridge in New York, the parkways and many other great works; but it is to be hoped that our street traffic and parking will never approach the appalling state of congestion in Manhattan, so graphically described and illustrated by the author. During recent years, many of us may have smarted under our economic dependence upon America and the increasing popular tendency to follow American fashions; but we should not be too proud to take advantage of the mass of useful information now presented to us in this authoritative book.

* PLANNING THE MODERN CITY. By Harold MacLean Lewis. 2 Vols., pp. xxii, 284; xii, 224, illustrated. John Wiley and Sons, Inc., New York; Chapman and Hall, Ltd., London. 36s. net each volume.

NOTES AND NEWS

Background Architecture.

THE fashion in placing models or mannequins (is there any difference?) in front of famed pieces of architecture for photographic purposes is at least commendable in that some of the better class fashion journals then become somewhat more comprehensible to the average architect.

Distance would appear to be no object, for one is as likely to see a beauty backed by the Temple at Palermo as by the portico of St. Martin-in-the-Fields; but alas, there accompanies the illustration no lyrical note either upon the lady or the building. Readers are, however, informed that the shoes the model is wearing can be obtained from Messrs. So and So at a usually pretty fabulous price.

If there is any merit at all in this advertising practice it is that it firmly establishes the unmistakable decorative and photogenic quality of classical architecture. As a background to the most soigné fashion style it is obviously unsurpassed. But the idea does not stop at the purely classical, for some restrained and attractive Victorian interiors have been resurrected, one might almost say especially for the job, and these too have a way of looking "just right" for the purpose. From this it may reasonably be presumed that traditional architectural forms still please the eye and attract the attention of readers.

Brighton Parish Church.

BRIGHTON Parish Church, St. Peter's, has suffered widespread erosion by the weather and salt-laden winds. When a survey was made after fallen pieces of stone had been found around the church tower the condition of the stonework was found to be much worse than had been expected. The parts most affected were the carving, parapet, pinnacles, and flying buttresses; the tower itself was pronounced structurally sound. Dangerous masonry has already been removed, and a committee, with the Mayor of Brighton as chairman, has issued an appeal for £10,000 to meet the cost of checking further disintegration and of repairs. The church was designed by Sir Charles Barry.

Photographic Exhibition.

THE 94th annual exhibition of the Royal Photographic Society will be opened by the president, Mr. Percy W. Harris, at the Society's House at 16, Princes-gate, S.W.7, on September 8.

For this year's exhibition 5,300 entries were received, of which 863 have been accepted. Limitations of space have made it necessary to divide the exhibition into the following two parts. Part 1.—Pictorial, colour and stereoscopic (prints and transparencies): September 9 to October 2 inclusive. Part 2.—Scientific, nature, record and technical (prints and transparencies): October 8 to October 26 inclusive.

For the pictorial prints section approximately 2,300 entries were received, of which 167 were accepted. These entries have come from various parts of the world, including most of the European countries, China, India, Australia and many of the States of North and South America.

Belfast Cathedral Contract.

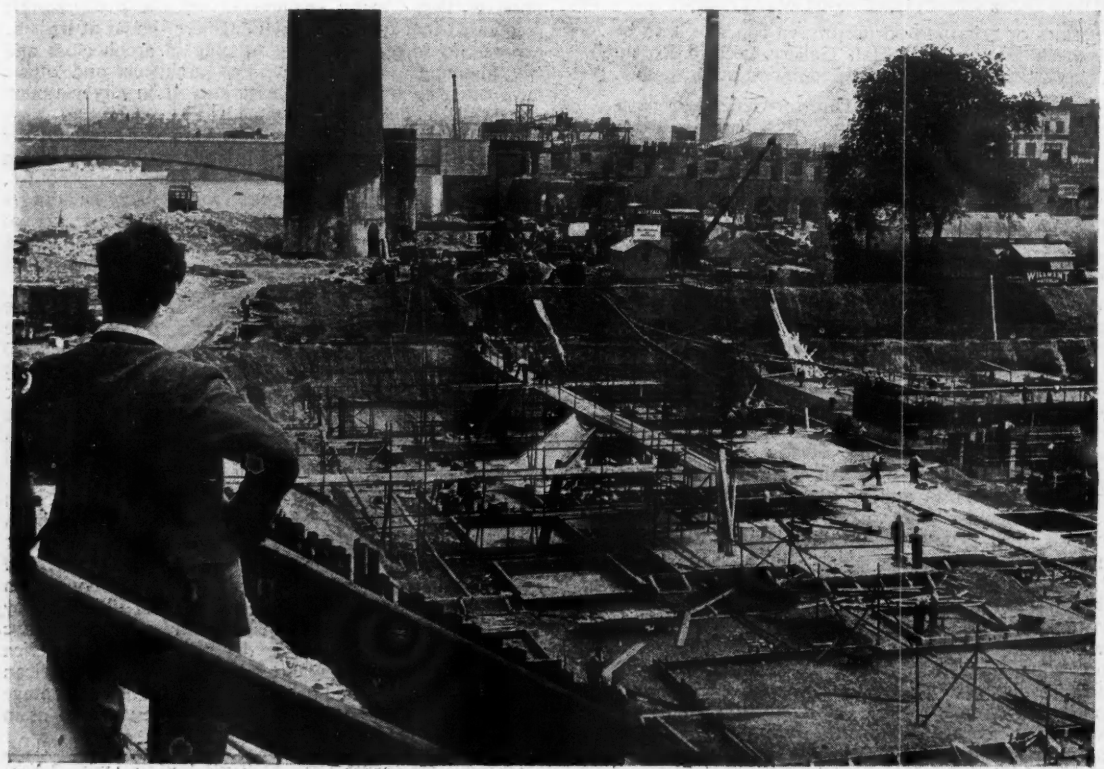
A FURTHER contract is to be placed shortly in connection with the completion of St. Anne's Cathedral, Belfast. The cathedral authorities are at present seeking the approval of the Northern Ireland Government to a contract for the foundations of the contemplated East End. These will require at least a year to complete, and the Cathedral Board will then have to decide whether to proceed immediately with the building of the superstructure, or, alternatively, to delay operations in the hope of more propitious circumstances later.

The report of the committee responsible for the work states: "It is a saddening and ironic fact that in 1933 the architect's estimate for completing the East End was £35,000, while to-day a sum in the region of six times that figure is required for this self-same work, a sum in excess of £200,000."

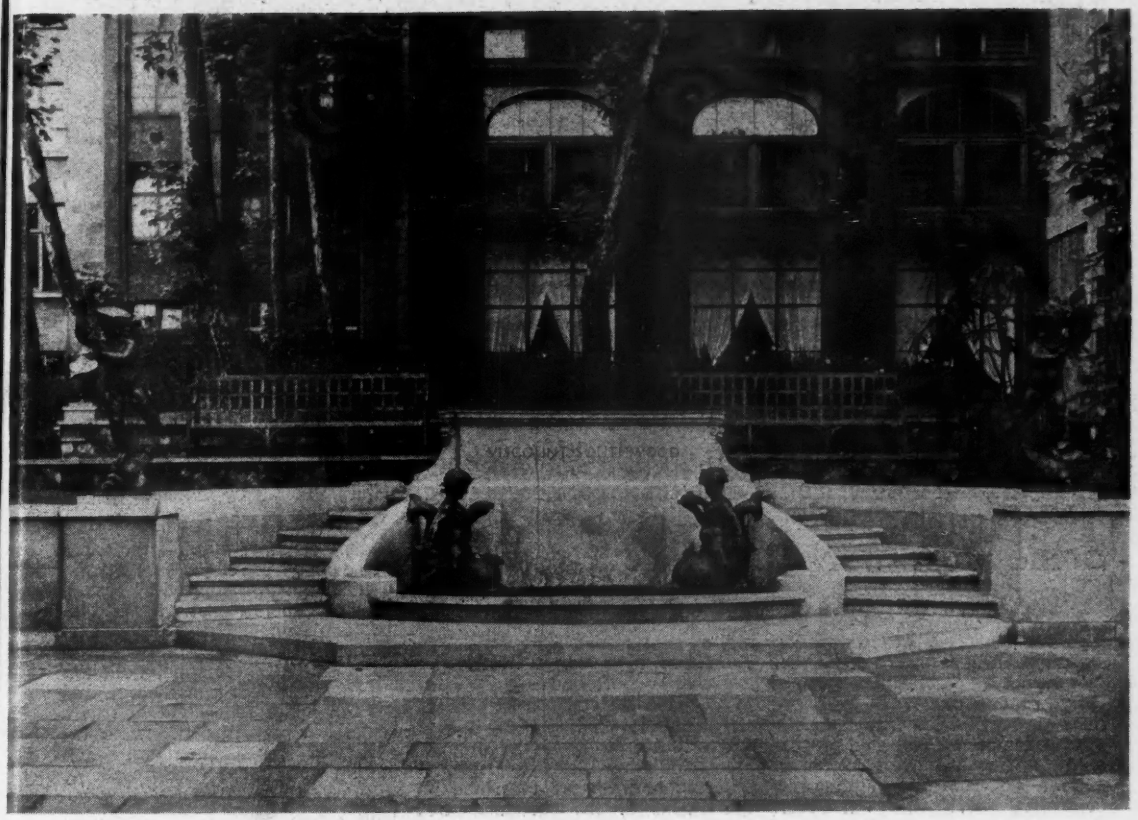
Not long before his death Sir Charles Nicholson, F.R.I.B.A., the cathedral architect, prepared final plans for the completion of the East End and Tower, and, as circumstances permit, the extension will proceed in accordance with his designs.

New York's Overspill.

THE problems created by London's ever-expanding size have their counterpart on the other side of the Atlantic. The number of Americans who want to live in New York City, job or no job, increases week by week. They come from far afield, some from the other side of the Continent. There is insufficient accommodation to merit this influx with the result that many make do with the next best and seek a home within travelling distance of the city. A decade or so ago White Plains, 20 miles from New York, was a well-to-do residential township, but in recent years land in the vicinity has been bought for factories and industrial buildings. As a result the town has expanded, blocks of flats are replacing charming houses and there just isn't enough room to park the cars of the inhabitants. The once pleasantly dignified main street has become inadequate for dealing with the town's own traffic



THE SOUTH BANK SITE is seen above, and progress is shown on the foundation work for the Festival of Britain Theatre.



THE VISCOUNT SOUTHWOOD MEMORIAL, ST. JAMES' CHURCH, PICCADILLY. Prof. A. E. Richardson, R.A., Architect. The late A. F. Hardiman, R.A., Sculptor.

as well as that of Route 22, the main highway from New York across the Canadian border, of which it is part, and the State authorities propose a by-pass three miles outside the town, through the neighbouring village of Valhalla. New York State roads have always been of a high standard, and it is anticipated that this latest project, which is expected to take five years to complete, will be no exception.

Atomic Age Architecture.

ARTHUR EMERSON BURTON, an instructor at Iowa State College and associate engineer of the U.S. Atomic Energy Commission, has received a 1,500 dollar Langley Scholarship from the American Institute of Architects to perform research on atomic age architecture. The Committee on Planning for the Atomic Age of the American Institute of Architects is seeking better knowledge of the technological and defence aspects of architecture and city planning in relation to atomic energy. Mr. Burton will provide new information on laboratory design necessary in the use of products of nuclear fission for research, medicine and industry, states Mr. E. R. Purves, executive director of the A.I.A.

Design in Business Printing.

THE COUNCIL OF INDUSTRIAL DESIGN and the British Federation of Master Printers are presenting an exhibition of "Design in Business Printing" at Murray House, Petty France, S.W.1, from March 3 to April 10, 1950. It will be the first of its kind ever to be held in this country.

The communication of information and ideas effectively and pleasantly by means of print is the concern of every business house in the country, for the prospective client or customer often forms his first impression of a firm from its printed matter, whether it be a visiting card, a letter head, a prospectus or a poster. It is hoped that this exhibition will:—

(i) Show business men the value of a high standard of design in their commercial printing; (ii) show that high standards are widely maintained throughout Britain's printing industry; (iii) provide printers' apprentices and students of typography with a comprehensive display of good business printing; and (iv) illustrate a standard of design in printing that will be worthy of the industry in the 1951 Festival of Britain.

The exhibition will be divided into nine sections, dealing with commercial stationery; company printing; leaflets, folders, etc.; publicity booklets, catalogues, etc.; house and institutional magazines; invitation cards, menus, programmes, etc.; posters, window bills, etc.; commercial greeting cards, trade calendars; and specimens of out-moded or uninspired business printing, accompanied by contemporary work of good design planned to replace it.

Printers, advertising agents and print users are invited to send in samples of their best contemporary work at once. They are especially invited to submit examples of work "Before" and "After" re-designing. The address is "Design in Business Printing" Exhibition, Council of Industrial Design, Tilbury House, Petty France, London, S.W.1.

Professional Announcements.

ON and after August 26 the address of MR. GEORGE ELLIOTT, L.R.I.B.A., M.Inst.R.A., will be 16, Beechcroft-road, Bushey, Herts.

MR. FREDERICK NAPP, A.R.I.B.A., A.M.T.P.I., chief architectural assistant in the Borough Engineer and Surveyor's Department, Luton, Beds, since 1945, has been appointed deputy city architect of Plymouth. He will take up his new appointment in October.

COMING EVENTS

Monday, September 5.

INSTITUTE OF QUANTITY SURVEYORS (LONDON BRANCH).—Film show and discussion on "Earth Moving." Speaker: Mr. J. Gregg, M.I.O.B., Caxton Hall, Caxton-st., Westminster. 6.30 p.m.

Wednesday, September 7.

LONDON MASTER BUILDERS' ASSOCIATION (CENTRAL AREA No. 1).—80th general meeting, preceded by a luncheon. Derry and Tom's Restaurant, Kensington High-st., W.8. 1 p.m.

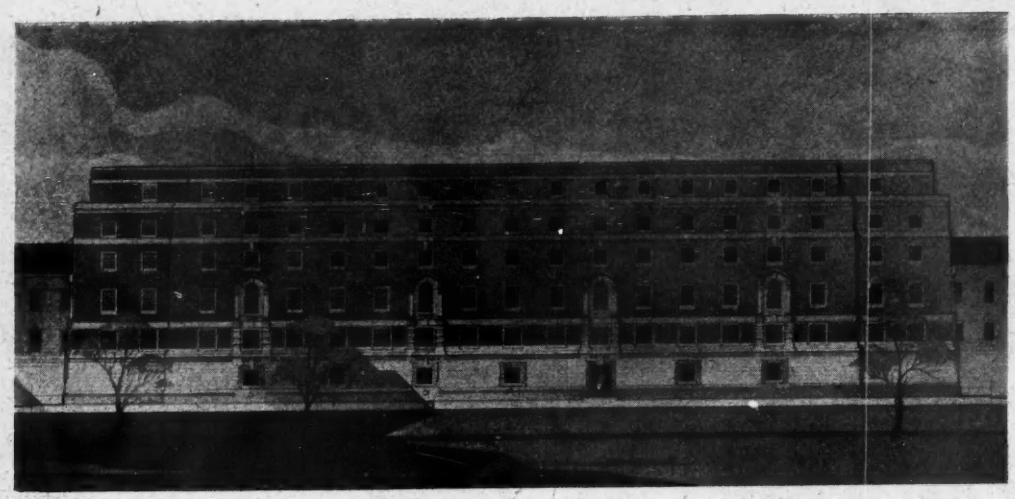
Thursday, September 8.

ROYAL PHOTOGRAPHIC SOCIETY.—94th annual exhibition. 16, Princes-gate, London, S.W.7. 3 p.m.

FROM "THE BUILDER" OF 1849

Saturday, September 1, 1849.

The high-level bridge at Newcastle was opened for the passage of trains on Wednesday week. Only one line of rails, however, is complete enough for traffic. The tailors of Gateshead appear, from the *Observer*, to be disputing about the trowsers that saved the life of one of the workmen employed at this bridge, by hooking him in descent on a good stout nail driven in where a nail had no other special business to be at that moment. Why don't the nailers take example by the tailors, and uphold the admirable adaptation of *their* stout material for the *hooking* of passing workmen?



THE FARADAY BUILDING EXTENSION, LONDON, E.C. E. Bedford, A.R.I.B.A., Architect.

Some Post-war Telephone Exchanges

The Work of the M.O.W. Architects' Department

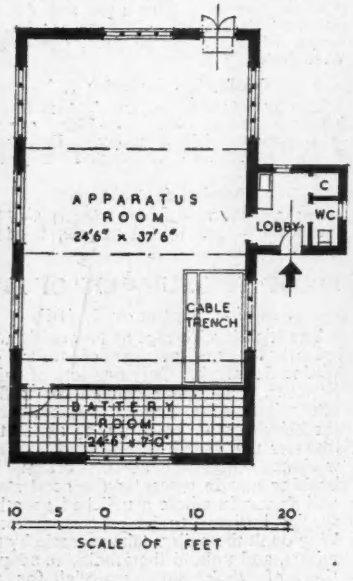
NORMAL building for Post Office services practically stopped early in the second World War, and since the termination of hostilities in 1945 it has been possible to proceed with only a small portion of the extensive arrears of building accumulated over the war years through the scarcity of labour and certain building materials. Furthermore, in particularly urgent cases, the proposed permanent buildings have had to be postponed and the accommodation provided by temporary schemes.

Post Office Services fall into two main categories—Postal and Telephone—and the accompanying illustrations are of a few of the various types of buildings already completed, in course of erection, or expected to start building soon, for the Telephone Services.

Telephone exchanges vary in type and size according to the requirements of the locality. Each is designed to meet the estimated requirements of the particular area which it is to serve, be it rural, industrial, commercial or residential.

The smallest type built by the M.O.W. is the Unit Automatic Exchange (U.A.X.), which provides for 400-800 subscribers and meets the requirements of rural and small towns. Another type is the small Telephone Repeater Station (T.R.S.), which is located on certain telephone cable routes and contains the amplifying equipment which maintains the volume of speech on trunk calls. These small buildings are of permanent construction and have standard type plans, but each is designed to harmonise with the particular local amenities. Examples of these buildings are Wilton U.A.X. and Church Cobham T.R.S.

The larger and more varied telephone requirements of suburban and urban areas are met by specially planned automatic and auto-manual exchanges which cover the greatest demands of the telephone services. The automatic



WILTON EXCHANGE. The plan.

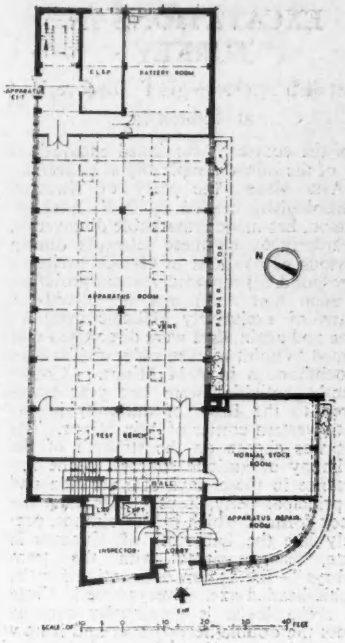
WILTON UNIT AUTOMATIC EXCHANGE

F. M. DEAN, A.R.I.B.A., ARCHITECT

E. E. FREEBORN, A.R.I.B.A., ASSISTANT ARCHITECT

THIS site fronts the Salisbury-Shaftesbury road, at the western end of the village, and is bounded on two sides by cottage property and on the remaining one by open agricultural land down to the River Nadder. The accommodation provides for 900 sup. ft. of apparatus area, excluding battery and staff rooms.

The construction is of solid brick walls, part facings, part rendered externally. The roof covering is of hand-made tiles, and metal windows are on wood frames.



CHISWICK. Ground-floor plan.

exchange is operated by automatic telephone apparatus and only requires the attention of a small staff of maintenance engineers. The auto-manual exchange has, in addition, manual switchboards and an operating staff to deal with calls outside the range of the automatic system. The switchboards are arranged in large switchrooms and operated by telephonists.

Such exchanges are normally designed to accommodate between 800 and 10,000 lines. Hayes, Chiswick, Lee Green are examples of automatic exchanges. Chiswick is still in course of erection. Newmarket is an auto-manual exchange. Claygate is a manual exchange in temporary construction because the urgency in this case did not permit of the erection of a permanent building.

In large towns and cities, larger telephone buildings are required, some to cover the overseas as well as the national requirements of the Services. North Manual Control Centre, now in course of erection, is in this category, and so also is Faraday Building Extension, now in the planning stage. These are both in London.

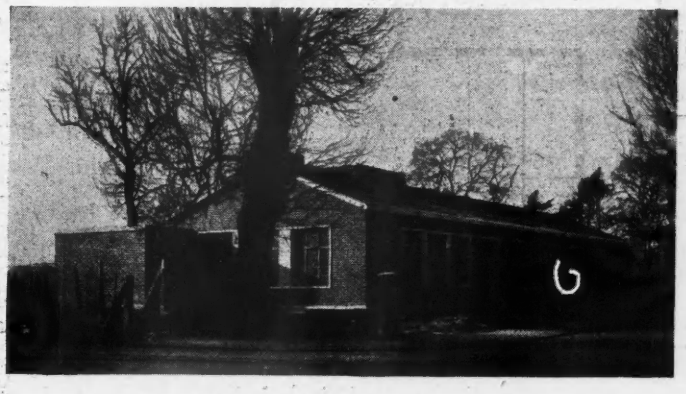
Mostly traditional materials are used in the construction of the permanent telephone exchange buildings. Fire-resisting construction is employed throughout, and where two or more floors in height, the buildings have steel or reinforced concrete frames. Dressed stone, facing bricks, natural slates and clay tiles are in general use for external walls and sloping roofs. The window frames are usually of steel or aluminium, and the doors of hardwood. All apparatus and power rooms have hardwood block floors. Good quality rubber and

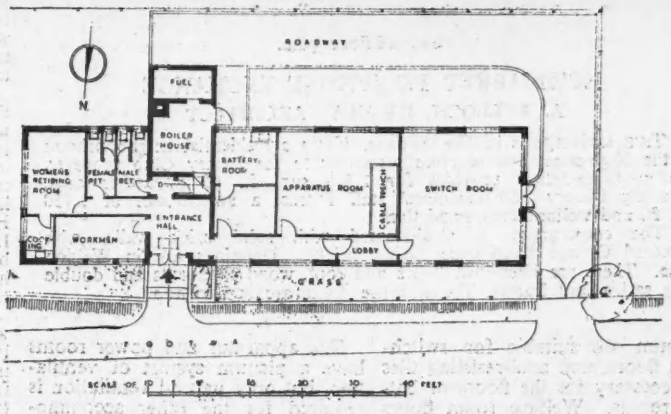
CHISWICK TELEPHONE EXCHANGE

E. BEDFORD, A.R.I.B.A., ARCHITECT

T. F. WINTERBURN, A.R.I.B.A., ASSISTANT ARCHITECT

THE site is "backland," surrounded on three sides by factory property and on the fourth by the back gardens of houses. The accommodation provides 6,800 sup. ft. of apparatus area, excluding battery and engineers' staff rooms. The structure is steel-framed, designed for upward extension. External walls are in brick, while floors and roof are of reinforced concrete and windows are standard metal frames.



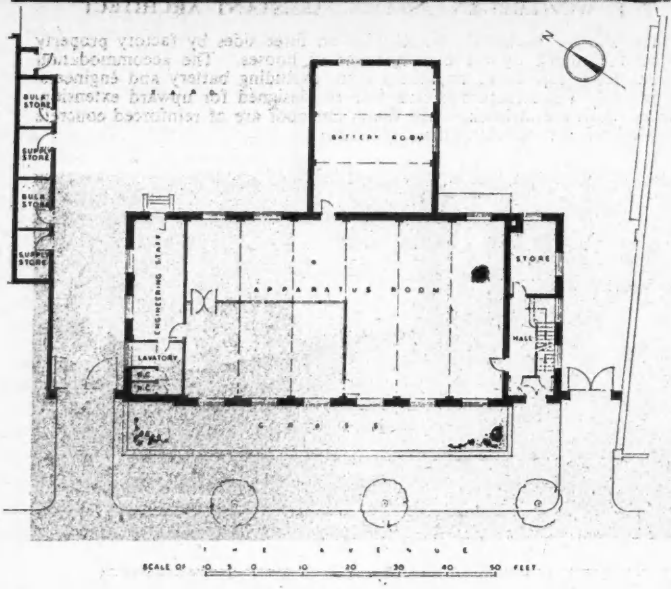


CLAYGATE TEMPORARY MANUAL EXCHANGE

E. BEDFORD, A.R.I.B.A., ARCHITECT

T. F. WINTERBURN, A.R.I.B.A., ASSISTANT ARCHITECT

PART of the land acquired for the permanent exchange building has been used for this exchange and the accommodation provides 575 sup. ft. for the switchroom and 460 sup. ft. for the apparatus area. The construction is standard transverse concrete frame, with cavity walls faced externally, asbestos roof and standard metal windows in precast frames.



Ground-floor plan.

NEWMARKET TELEPHONE EXCHANGE

A. BULLOCH, F.R.I.B.A., ARCHITECT

THIS exchange is in The Avenue, within a residential neighbourhood off the High-street and in close proximity to the Jockey Club property. The accommodation provides for 2,400 sup. ft. of apparatus area, excluding battery and engineers' staff rooms, a switchroom of 2,750 sup. ft. and welfare accommodation.

The construction is steel-framed with solid brick walls, with Stamford Orange hand-made facing bricks. Dressings are in Weldon stone. There are filler joist floors and roof, wood casements and double hung sashes and frames. The entrance doors are in hardwood.

linoleum are suitable for switch-room floors, and acid-resisting tiles are necessary for the floors of battery rooms. Welfare room floors are covered with linoleum, and walls and ceilings generally are finished in plaster.

Heating is normally by low-pressure hot water, except in the small standard telephone exchanges and telephone repeater stations, where the heating required is provided by electric heaters.

The apparatus and power rooms have a plenum system of ventilation, but only natural ventilation is required for the other accommodation.

Tungsten lighting is general at present, but fluorescent lighting has been introduced in some cases.

The designs for all the post-war telephone exchanges for the Post Office have been prepared by the Architects' Department, Ministry of Works.

EXCAVATIONS IN TURKEY

Swedish Archæologists' Discoveries at Labranda

IN the course of continued excavations of the ruined temple city at Labranda, in Asia Minor, the party of Swedish archæologists, headed by Prof. Axel W. Persson, has made remarkable discoveries.

Finds made by these scientists during previous excavations in Greece (writes a correspondent) repeatedly posed problems to them that could not be solved by means of exclusively Hellenic material. Time and again, data were discovered that seemed to point to even older civilisations autochthonous in Asia Minor. Consequently, activities were last year transferred to the Ionia of antiquity in the south-western corner of Asia Minor. The spot was chosen on the strength of the testimony of antique sources to the importance in those days of Labranda and its principal deity, Zeus. Labranda, the Greek form of which is Labyrinthos, precisely like the Labyrinth of Knossos in Crete, is associated with the term "labrys"—the Carian designation for the double-headed axe. Everywhere in Crete the archæologist is continually running across the double-headed axe, and it now appears that its rôle in Labranda is quite identical.

Palaces and Club Quarters.

Last year's excavations, which were also under Professor Persson, yielded an amazingly rich collection of finds, including an Ionian marble temple, a portico from Roman imperial times and a large, older construction which has been named "The Palace." Apart from this, the party identified a couple of sizeable ruin heaps—the only things visible before the excavations were begun—as dating from the time of the Carian king Mousollos (about 350 B.C.). Judging from inscriptions uncovered, these buildings were simply club quarters where dignitaries from Mylassa down on the plain foregathered to the deity's grand festivals up in the hills of Labranda. In Professor Persson's words: "We found highly interesting Greek inscriptions shedding new light on the history of the last pre-Christian centuries. Perhaps the most important find we made consists of a couple of clay tablets with inscriptions in the Carian tongue, written with the Carian script.

"At present we are busy uncovering the north side of the Zeus temple from under two to three metres of rubble and rocks. At this spot, once the main entrance to the temple, a dozen inscriptions have been found. They are citations in honour of personages from Iassos, Heracleia and other points in the vicinity. In front of the temple, about one metre below the level of the temple floor, we have identified some walls of very ancient constructional technique.

"At the south-east corner of the temple, where the Carian clay tablets were found last year, we have now succeeded in removing an immense heap of very large foundation stones and are now preparing to explore the deeper strata underneath. It is possible that a whole archive of clay tablets will be located here. South of the temple several huge storerooms have been dug out in a large building with a corridor and staircase leading up to a second floor. Here we have found a large number of bronze coins and a gilded wreath which, in the hands of a capable renovator, could become a magnificent *objet d'art*."

CORRESPONDENCE

"Negative" School Buildings

TO THE EDITOR OF *The Builder*.

SIR,—Your leading article of August 19 on "Negative" School Buildings, while written with the best of intentions, is riddled with misconceptions.

In the first place, there does not seem to be any clear statement as to what the 1 per cent. figure represents other than the rather vague term "embellishments," and it would be easy for the reader to be left thinking that all architectural features of a decorative nature and all mural decoration in schools have to be provided within this figure. The fact is that the percentage referred to is usually allocated for one or more specific works of art, which are additional to the normal decoration of the building. As an example, the fact that Henry Moore and Kenneth Rowntree have undertaken commissions for the new Secondary Modern School at Stevenage does not mean that no thought has been given to colour and decoration in the rest of the building, the truth being very much to the contrary.

Remembering that it is for specific works of art and does not cover all features which might be classed as "embellishments," is 1 per cent. really too little? Many schools to-day are costing £100,000, which means that 1 per cent. represents £1,000. Projects on the lines suggested which I have seen in schools at Stockholm and Zurich were certainly carried out within such a figure, and there have been no complaints that the amounts were inadequate. From my own experience, there is no truth whatever in the statement that "money is. . . the obstacle" and that the Government should be pressed to increase the "miserable 1 per cent. for embellishments." The Government Departments concerned, prompted by the R.I.B.A., have taken the initiative in the matter, and only a minority of local authorities have so far allocated sums varying from ½ per cent. upwards. If your readers want to press anyone, why not the local councillors?

In any case, is there not something wrong with the assumption that you design a building and then spend so much money on adding "embellishment"? The answer is really in the hands of the official and private architects who are designing school buildings. Some of them are finding it possible to produce buildings which are light and full of colour and which provide a healthy, cheerful and stimulating environment for growing children, but it is done by conceiving their design as an integrated whole, not by adding a few swags to an otherwise dull building. The interesting thing is that such schools are not among the most expensive. Examples can easily be quoted to those who wish to look around and see for themselves.

BERNARD H. COX,
F.R.I.C.S., L.R.I.B.A.,

Fairwater-road, Llandaff, Cardiff.

*** We are obliged to our correspondent for his letter. There does not seem to be any serious difference of opinion between us. The theme of our article was not the normal decoration of school buildings. Contemporary school buildings are generally so bare that "specific works of art" may be rightly regarded as embellishments of them. What is the "normal" decoration of a school building? We should be surprised to learn that it includes the kind of mural and other decoration we suggested. The cost of such work must be dependent on its quantity and quality, and to some extent on the standing of the artist. On the general question of school design, obviously a satisfactory building is likely to be one conceived as an integrated whole; the idea of adding swags to dull buildings to make them attractive is merely fatuous.—ED.

Clerks of Works: the Missing Link

TO THE EDITOR OF *The Builder*.

SIR,—I feel that Mr. McKendrick, in his letter in your issue of August 26, is not quite on the right lines. He states that it takes 10 or 12 years to become a clerk of works. I suggest that 20 years would be nearer the mark. This is proved by the number of men up to the age of 53 years applying for membership of the Institute of Clerks of Works. It is, of course, true that clerks of works are awarded certificates on examination results, but what matters is the amount of practical experience they have had and their subsequent references from architects and engineers. The latter, of course, prove their abilities, for it is one thing to pass an examination by answering questions, some of which may be oral, and quite another matter to carry out a first-class contract under an architect or engineer. I suggest the men Mr. McKendrick refers to as returning to be tradesmen should never have taken the job of clerk of works. We must not lose sight of the fact that during the war many public bodies were lax in the types of men appointed as clerks of works. I met a case of a man acting as a clerk of works who was a physical culture expert. I do not think Mr. McKendrick need worry about the "missing link." Things will sort themselves out when the right jobs are open for the right men. I have been a clerk of works for 25 years, and, with a market wanting men who can do their job and who are in possession of bona-fide references, I have never even considered going back to being a tradesman.

A CLERK OF WORKS.

London.

Deed of Apprenticeship: Suggested Amendment

TO THE EDITOR OF *The Builder*.

SIR,—I have noted with considerable interest the constant appeals made to the industry to employ apprentices, particularly those who have served for a time with an apprentice master, and would endorse the many speakers' remarks as to the benefits derived by both master and apprentice, to the ultimate improvement in the standard of craftsmanship within the industry.

The Apprenticeship Deed is, however, in its present form, insufficiently comprehensive to form a binding contract, inasmuch as it lacks a penalty clause, and I have found to my cost that apprentices, for any reason, may decide to terminate their agreement without fear of redress; yet the master would hesitate to do so for obvious reasons.

I should be interested to learn if I may receive support from readers, by pressing through their organisations, for the Apprenticeship Articles of Agreement to be amended accordingly.

J. H. PARFITT.

Harrow-road, Wembley.

What Constitutes a Window Frame?

TO THE EDITOR OF *The Builder*.

SIR,—May I beg leave to doubt the wisdom of giving replies to questions such as the one appearing in your issue of August 26 under the heading "Inquiry Bureau," and dealing with painting on window frames.

I believe that the complete story should be told before a judgment is given. Let us look at the matter as revealed.

(1) The contractor states that he has "acquired a contract for the *external* painting of a number of houses," and quotes Clause 13 of the Specification, which relates to internal painting.

(2) A full half of Clause 13 is a description of the purpose for which the decoration is required. Did the contractor imagine that sashes would be left unpainted in a scheme of interior decoration?

(3) Certainly transoms and mullions are part of the frame. Do we know for certain that the glass is not glazed direct into the frames and that therefore there may be no argument at all, in that the doubtful sashes are non-existent? This seems to be confirmed in the letter from the corporation, which makes no mention of sashes, and though para. (2) of "Cain's" reply says that he disagrees with the architect's contention that all sashes are an integral part of the window frame, the architect never mentions sashes.

(4) "Cain" is also misleading by quoting the first part only of Clause 4 (d) of the S.M.M. because this same Clause (last two lines) gives the alternative of measuring wood frames per yard super, "the item (i.e., painting on windows) shall include the painting of frames, mullions, transoms and *casements*" (see Clause 3 (c)).

(5) But why, in the S.M.M., Clause 4 (d), is it necessary to say "casement frames, mullions or transoms"—are we wrong, after all, and is it then true that the *frame* is distinct from the mullion and the transom? Surely this is not true.

(6) The one unfortunate word in Specification, Clause 13, is the word "only"; does it mean "frames only," in an attempt to split them from their casements or sashes, or has the word relations with the context of the particular trade in the Specification? Here again it is unwise to judge without seeing the whole Specification.

(7) If the writer of the Specification had said: "Painting all interior surfaces of windows," would the contractor have painted the glass?

The foregoing are just a few of the questions which would arise in the mind of an arbitrator.

Clause 66 gives the architect power to decide finally, and I would have no hesitation in recommending him to order the work to be carried out as he intended.

DARK GLASS.

Hazell-grove, Cheshire.

*** "Cain" writes: I am obliged to your correspondent for his letter. I would point out, however, that if the questions and answers lead to improved wording and clarification of the various clauses of the S.M.M., then "Inquiry Bureau" will serve a most useful service. With regard to the ultimate paragraph of your correspondent's letter, the tone is somewhat severe, as the architect can obtain a detailed copy of the original estimate from the contractor.

Nationalisation and the Working Week

TO THE EDITOR OF *The Builder*.

SIR,—As it is as yet by no means clear that nationalisation is an effective instrument, it is to be hoped that those who advocate it will take earnest counsel among themselves before inflicting further harm on their British brethren.

Mr. Coppock himself is doubtful, for he observes: "It would be very necessary in dealing with a scheme of nationalisation, to assign distinctly where responsibility should lie." That is the crux of the problem.

Serious and practical students of human nature already know that when nationalisation comes through the door, responsibility quickly goes out through the window.

London, N.14. A. V. STAPLETON.

BOOK REVIEWS

THE HOME BUILDER'S HANDBOOK. By Kenneth Duncan. Pp. x, 515, illustrated. (D. Van Nostrand Co., Inc., New York.) Price $6.95, or 38s. 6d.

THIS sumptuously produced and lavishly illustrated book is dedicated "to all the hundreds of thousands of families who hope some day to build or buy a house." In his preface, however, the author—himself an architect—explains that it is not his intention to show anyone how to build a house with his own hands, but rather to supply such information as will enable his readers "to tell right from wrong," and "to check the work of architect and builder." He defines the "functions" of a house on his very first page, but shows at a later stage how the traditional "Colonial style" may be utilised as a cover or façade for the latest functional conveniences and internal gadgets. To many of us the most interesting aspect of the work is the comparison that it allows us to make between current domestic architecture in the United States and in England. He considers that "the small house has now been reduced to the irreducible minimum" with its floor area of less than 625 square feet, and observes that 10 million new dwellings, mostly small, are urgently required in the States. He accepts a single living-room of at least 175 square feet, plus a small "streamlined kitchen" for such minimum houses, but pleads for a supplementary bay window or "porch." Bedrooms might be more scientifically planned on the lines of Pullman sleeping coaches, where less than 25 square feet per head suffices, and bunks might be more freely used. Sleeping porches could be rendered tolerable by using electric blankets, and thus saving costly bedroom construction. Kitchens as small as 60 square feet are allowed in America, but Mr. Duncan prefers 100 feet as a minimum, or 125 feet if a "dining nook" or "dinette" is to be included in it. Several illustrations of model kitchens are given, thanks to the enterprise of both gas and electricity undertakings, which, as in England, have kitchen planning departments.

"The servant," he remarks, "has disappeared from the middle-class American home—probably never to return"; and houses must be planned accordingly. More unexpected is his statement that both cellars and attics are tending to disappear, too. Other signs of the times are his plans of "expansible" or "expandable" houses, his use of the term "luxury-house," to describe dwellings with more than two sitting-rooms and three bedrooms, and his lengthy list of electrical domestic gadgets, to which he adds 84 standard symbols for indicating various electrical fittings on architects' plans! One photograph shows a "utility package" (or, as we should say, prefabricated plumbing unit) being rolled into a new house through an ordinary doorway. As to costs, he estimates that average prices rose by about 70 per cent. between 1939 and the spring of 1948, when he was writing; elsewhere he implies that current prices are more than thrice those prevailing in 1915. His arguments for the employment of architects on small houses are persuasive and cogent, but he faces the undeniable fact that "stock plans" (without elevations) are supplied by architects of repute to the "home magazines" and sold by them at a comparatively low price.

The chapter on plumbing shows all the drains fixed internally, but of iron, and the section on construction is largely concerned with timber-framed houses. His advice on sites, orientation, finance and other practical matters is sound, and is augmented by a mass of technical appendices.

The author considers that the three favourite styles in America, in order of current popularity, are "Early Colonial," "Georgian," and "Contemporary." The last-named category embraces the work of Frank Lloyd Wright and his kind, but not that of the "International" school, as Mr. Duncan calls it, which arrived from Europe with the refugees, and "never caught on in North America—fortunately, we believe." Prefabricated houses are still unpopular, partly through prejudice and misunderstanding, and have not yet appeared in the vast numbers that were anticipated. This book should interest English readers connected with building, and the host of designs illustrated might even be useful to them "over here."

M. S. B.

THE DESIGN AND EQUIPMENT OF HOSPITALS. By Ronald Ward, F.R.I.B.A. Pp. xvi, 360, Illustrated. (Bailliere, Tindall and Cox.) 42s. net.

As the Medical Officer of the L.C.C. justifiably states in his foreword, "a comprehensive textbook on this subject is a long-felt want," because most of the available up-to-date information is scattered in miscellaneous articles in the architectural and medical press. The need for such a manual has become all the more urgent in view of the recent establishment of the National Health Service and the consequent probability of a great boom in hospital construction. The book contains 177 line drawings, mostly outline plans (without a scale) of recent hospitals, or typical plans of the author's own invention, and about 100 excellent half-tone plates. The lack of a complete index to individual hospital buildings illustrated is a defect, e.g., there are many illustrations of the Edgware General Hospital, but no reference to it in the index and no indication of its architect's name. Most of the examples are British, but a fair number of useful plans from the United States, Germany and Finland are included.

The first part of the book deals with "General and Administrative Considerations." The author states that the pavilion type of plan is becoming obsolete, that wards will tend to become smaller, and that there will be more one- and two-bed wards. He discusses the relative advantages of multi-storey and low dispersed buildings, but says that "there is no such thing as a standard layout for a hospital." The buildings should preferably occupy no more than a third of the area of the site. His suggestion of fixtures for cleaning-cradles inside staircase wells is ingenious, and he is informative on waiting halls for visitors, on kitchens, and on hospital libraries; while his plea for more amenities for nurses has an obvious topical value to-day. The long section on "Medical Considerations" is, of course, highly technical, particularly in regard to the arrangement of beds transversely or longitudinally in wards, on the planning and equipment of sanitary blocks, and on the constructional precautions to be taken in certain departments against the effect of X-rays. Chapters on various special wards and special hospitals are followed by his final section on "Construction," including the engineering services. This admirable section includes the surprising but truthful comment that "one is more likely to find an architect's design unspoilt in a hospital" than in a church, for obvious reasons: and the author then proceeds to a very temperate and persuasive definition of modern architecture, arguing that the traditional forms of construction do not fulfil the requirements of modern hospital building without extra cost. He considers that, because theories of hospital design become obsolete so quickly, a life of about 30 years should be assumed for buildings: this is evidently a point against the multi-storey type. On the whole, he favours oil-fired boilers for heating, with low-pressure hot water, and panel radiators. On doors, windows, pipe-ducts, colours, and acoustical treatment he is particularly helpful. The whole book is well written and is also admirably printed on thick paper with large type and generous margins. M. S. B.

BUILDING FOR DAYLIGHT. By Richard Sheppard and Hilton Wright. (Allen and Unwin, Ltd.) Price 21s.

THIS book is an illustrated survey of the methods of planning and siting buildings in relation to the admission of daylight to their interior spaces. It includes detailed specifications for the types of glass suitable for various kinds of buildings such as houses, schools, hospitals, hotels and large-scale structures, such as railway termini. An introductory historical note on the evolution of English window design is contributed by John Gloag.

DEVELOPMENT PROCEDURE UNDER THE TOWN AND COUNTRY PLANNING ACT, 1947. By W. C. Graper, M.T.P.I. (Crosby, Lockwood and Son, Ltd.) Price 8s. 6d.

MR. W. C. GRAPER, M.T.P.I., an area planning officer of Hampshire County Council, is the author of this guide, which is written primarily for architects and surveyors who, Mr. Graper believes, may feel somewhat overwhelmed by the complex mass of legislation now applicable. With the object of presenting a concise review of the essentials, the author has set out in plain language an explanation of the Act as it applies to development procedure. Rather than follow the Act section by section, he has extracted only such matter as he considers of immediate importance to practising architects and surveyors. The result is a valuable guide in clear language of the requirements of the Act.

BOOKS RECEIVED

POUR YOURSELF A HOUSE. By F. F. Peters. (London: McGraw-Hill Publishing Co., Ltd.) Price 24s.

PROCEDURE HANDBOOK OF ARC WELDING DESIGN AND PRACTICE. (Herts: Lincoln Electric Co., Ltd.)

THE MEASUREMENT OF SLATING AND TILING. By C. G. Dobson. (Leeds: National Federation of Roofing Contractors.)

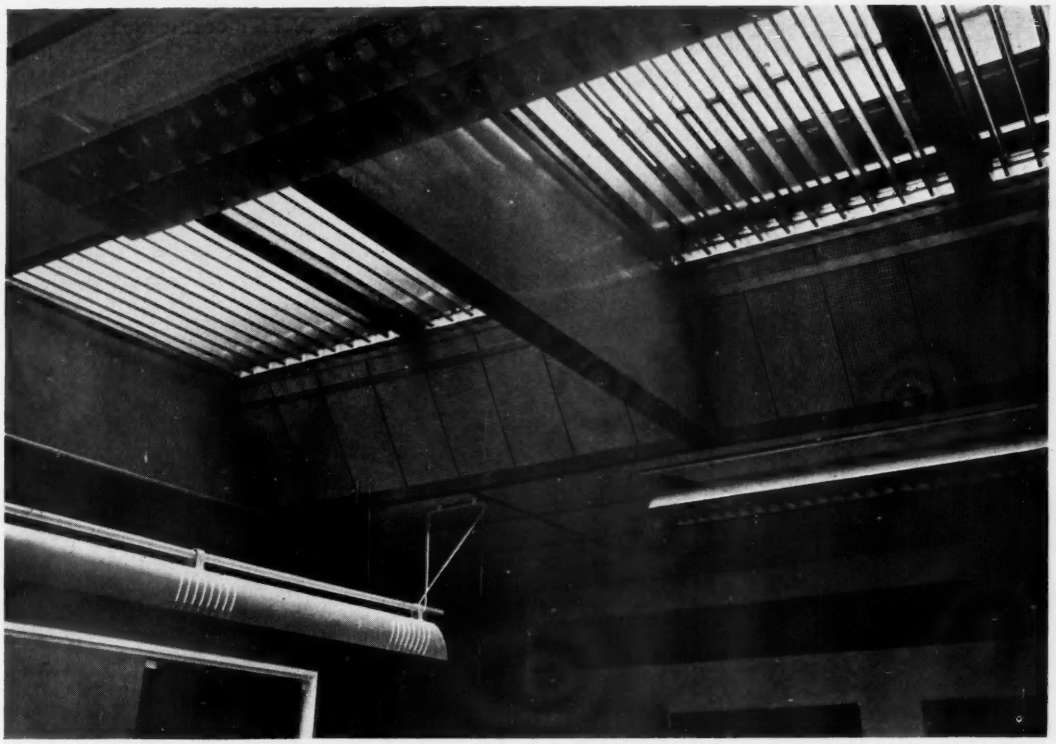
WILLIAM KELLY. (Aberdeen: The University Press.) Price 15s.

WOOD SPECIMENS. (London: The Nema Press.) Price £2 2s.

*** *Books reviewed in these columns may be obtained on application to the Publisher, "The Builder," 4, Catherine-street, Aldwych, W.C.2 Cash should accompany the order.*

Twelfth-Century Murals Found.

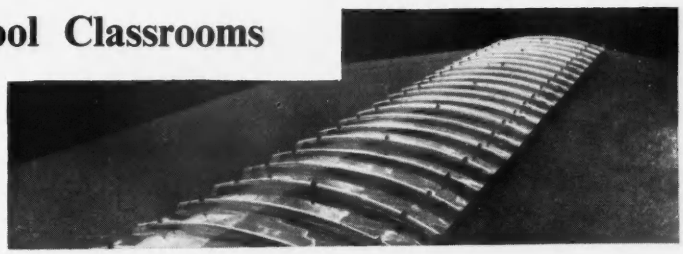
Mural paintings of Nativity scenes dating back to the twelfth century have been uncovered by workmen stripping plaster from the walls of the Norman parish church at Coombes, a small village at the foot of the Downs, near Steyning. Following a request by Dr. Duncan-Jones, Dean of Chichester, a grant of £300 has been made by the Pilgrims' Trust towards the restoration.



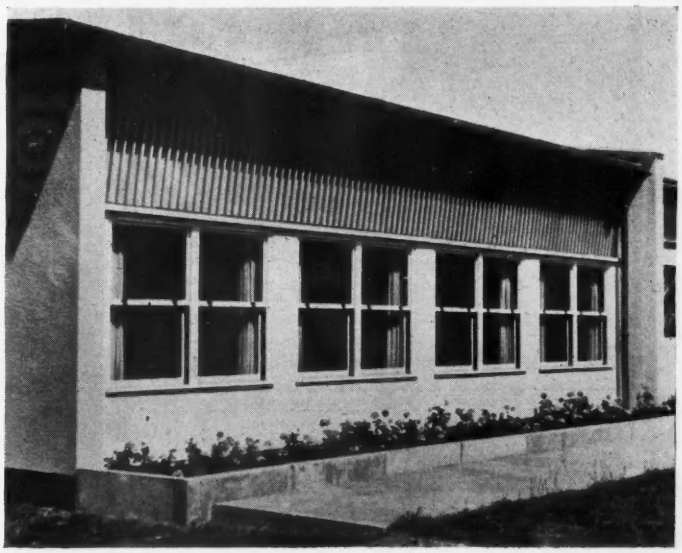
Detail of louvred roof section. *Below*: **The Perspex roof light and exterior view.**

Daylighting of School Classrooms

A New Experiment at the LASCELLES SCHOOL, Harrow, for Middlesex C.C.



C. G. STILLMAN, F.R.I.B.A.,
Middlesex County Architect



SHOWN on this and following pages is an interesting new experiment in the daylighting of school classrooms. The experiment has been designed under the direction of the Middlesex County Architect and its aim has been to secure a simple method of distributing daylight and preventing sunglare. This has been achieved, and with it, avoidance of large window areas and undue height of walls. The work has not been costed, but opportunities for economies are patent, as it has been found possible to make a general ceiling height of 9 ft. 6 in.

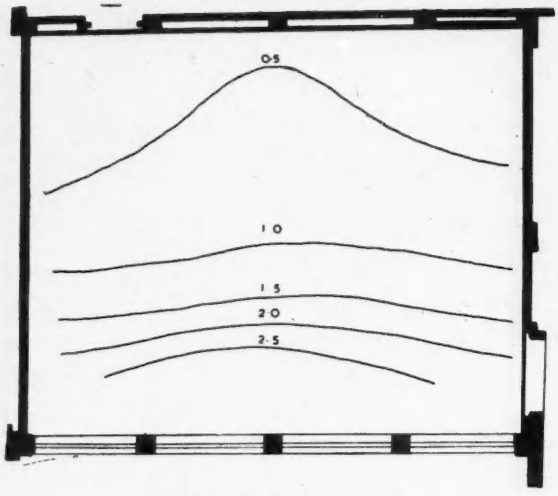


Fig. 1.—Side lighting only.

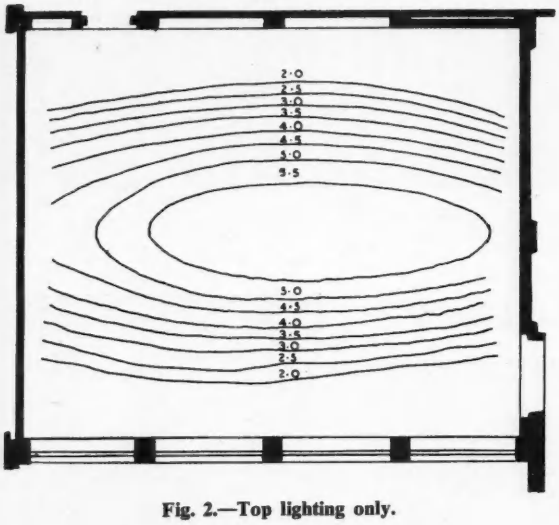


Fig. 2.—Top lighting only.

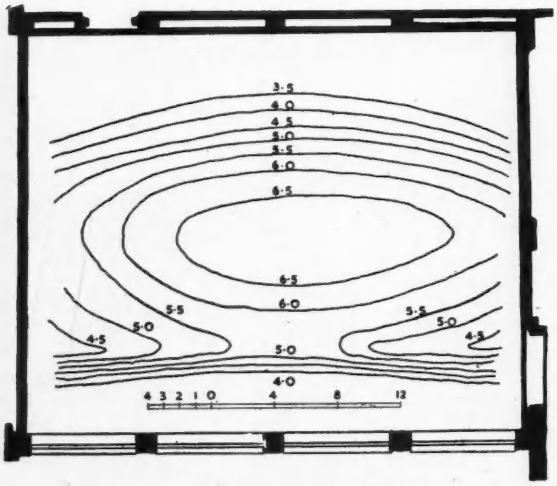


Fig 3.—Combined top and side lighting.

Plan of prototype classroom of Lascelles School, South Harrow, with superimposed contours of percentage

A NOTEWORTHY contribution to better daylighting of school classrooms has been made by the Middlesex County Architect, Mr. C. G. Stillman, F.R.I.B.A., under whose direction a standard roofing unit has been designed.

PROBLEM. — The most outstanding feature of this new form of designed lighting is the overhead means of providing distributed daylight and the simple and attractive method of preventing sun-glare. The problem was to evolve a suitable and easy method of providing adequate and well-distributed daylight to classrooms other than the more standard system of large window areas to the south side, which entails considerable difficulties in applying glare baffles and hoods.

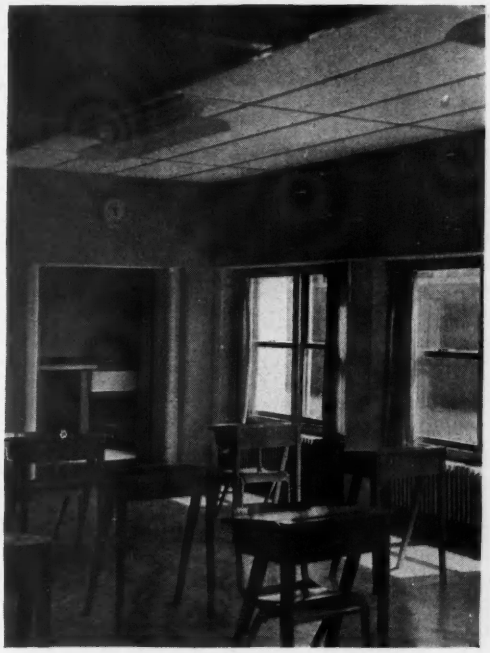
SOLUTION.—The roof is constructed of light-alloy trusses spaced at 8-ft. centres and 24-ft. span on piers which are independent of the roof structure, and may be of aluminium alloy, steel, brick or concrete. Daylight is admitted through a continuous, transparent, corrugated Perspex roof-light; below this roof-light are adjustable aluminium louvres which control the amount of illumination and eliminate glare by interrupting direct sunlight. Not only has this given a high degree of illumination without glare, but it has also removed the necessity of orientating classroom blocks to face in one direction, which allows more freedom in planning and grouping school buildings. Measurements made by the Building Research Station indicated that the daylight factor due to the roof-light and windows together varied from three and a half to seven per cent. over the working area. The daylight factor due to the windows alone ranged from half to two and a half per cent. over the same area, showing the considerable advantage gained from the roof-light.

VENTILATION.—Aluminium double-hung sash windows are placed on the outside wall for ventilation, direct light and view. Cross ventilation has been obtained by a continuous adjustable metal louvre over the corridor wall. By the use of smaller double-hung sash windows, elevational treatments can be designed in a more pleasing domestic manner. With the central louvre light it has been found possible to make a general ceiling height of 9 ft. 6 in.

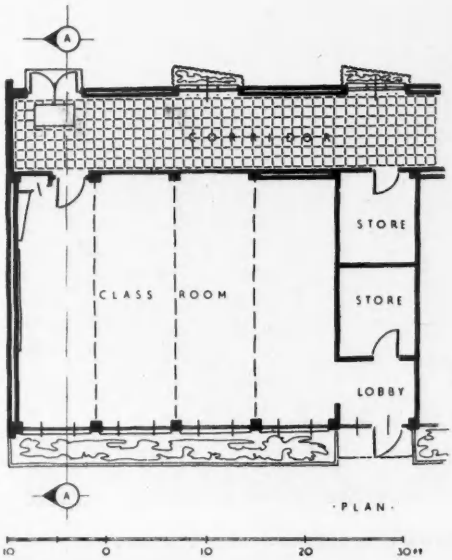
CONTRACTORS.—The builders were Messrs. Prestige, Ltd.; the roofing was supplied and erected by Messrs. Roberts Adlard and Co., in collaboration with Structural and Mechanical Development Engineers, Ltd. Suppliers were: Turners, asbestos roof decking; Ruberoid, roofing felt; Tentest, ceilings; Leyland Paint Co., Ltd., paint; Gibbons and Co., Ltd., windows; Educational Supply Association, furniture; and F. H. Pryde and Co., Ltd., lighting fittings. The Perspex was supplied by I.C.I.

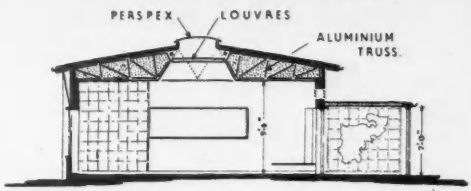
Above:
Section through a model.

Right:
View of classroom.



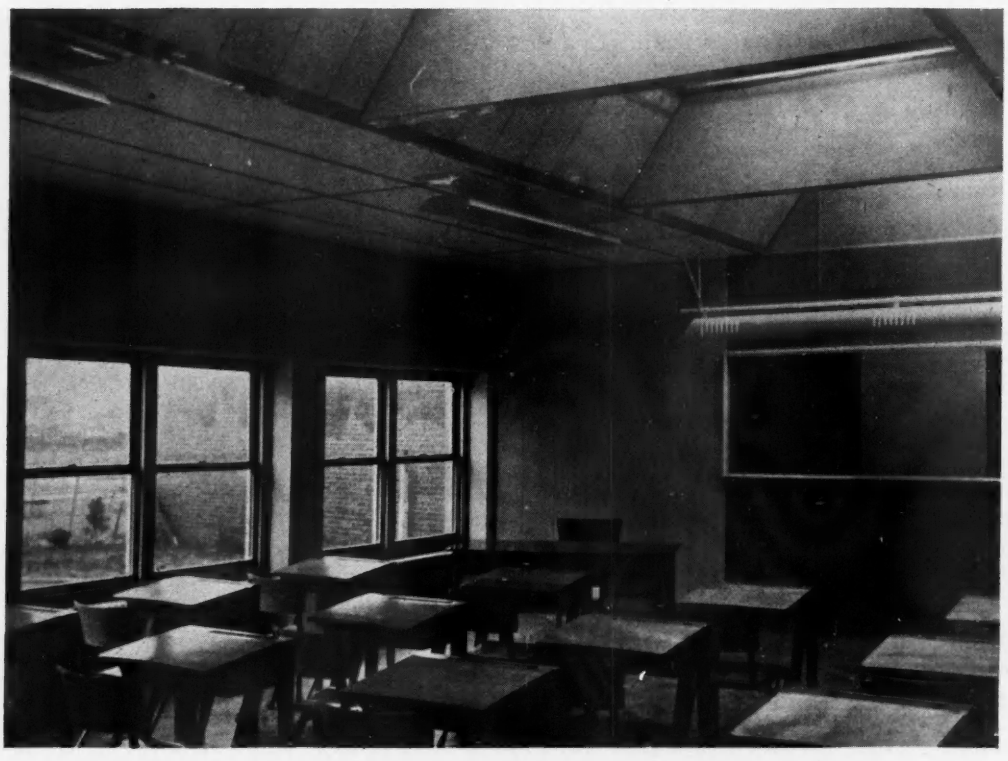
Below:
Plan and section through classroom.



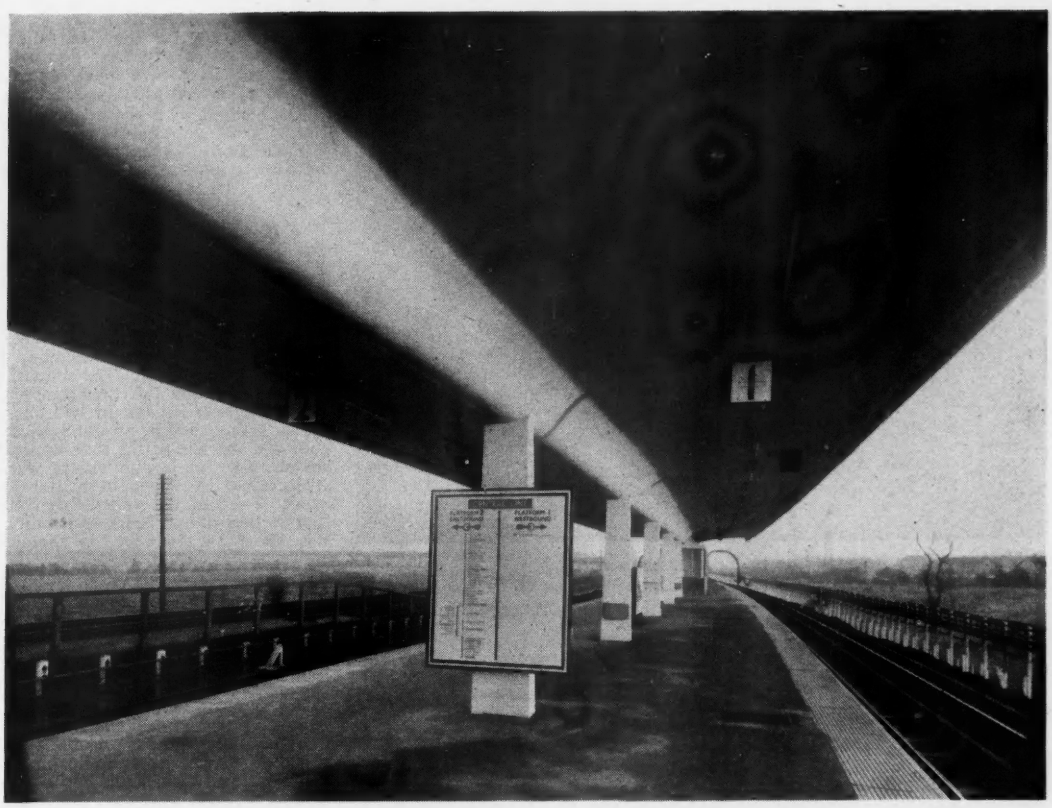


C.G. STILLMAN F.R.I.B.A. COUNTY ARCHITECT

View of classroom. The space between the blackboards is for the use of an epidiascope for visual instruction. At such times the louvres are closed and window blinds drawn. The ventilation louvres are seen over the door.



THE LASCELLES SCHOOL, HARROW, FOR MIDDLESEX C.C. Another view of classroom.



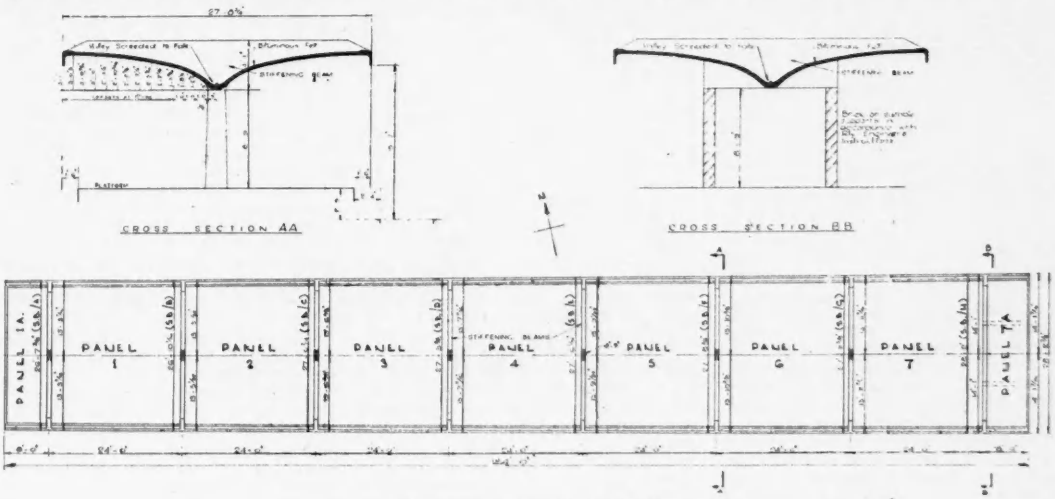
ISLAND PLATFORM SHELTER, RUISLIP GARDENS STATION

For the Railway Executive (Western Region)

THIS platform shelter is one of a number recently designed by the Chief Engineer, Railway Executive (Western Region), in conjunction with Messrs. "Twisteel" Reinforcement, Ltd., and, together with three others erected simultaneously, is believed to be the first of the type in the country.

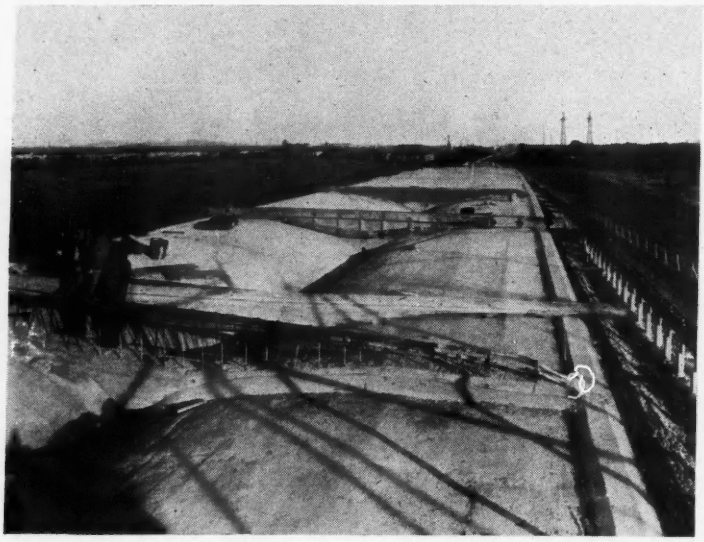
The shelter consists of a shell-type roof of an average thickness of 2½ in. carried on nine columns, each with a transverse upstand beam above the shell. The columns are spaced at 24 ft. centres and the overall length of the shelter is 184 ft. It commences over the egress to the platform of the subway stairs, and for clear access the centre column here gives way to two columns abutting either side of the subway stair wall. At the opposite end the shelter is continued over and past a small brick waiting room, the last of the main columns being five feet beyond this, while the roof itself oversails eight feet beyond the last column.

The track at Ruislip Gardens Station runs along an embankment some 20 feet above the road level below. As the shelter was to be erected on an island platform, these two factors made it necessary to erect a temporary bridge of a clearance of 13 feet over



Plan and cross-sections of cantilevered roof.

View showing roof reinforcement.



View of roof showing concrete work almost completed.

the one track to the island platform, and a hoist tower to serve this bridge from the lower ground level, a total height in all of approximately 45 feet, including working height.

A restriction to be faced was that on the positioning of the tubular supports for the centre to the outer edges of the shell roof. This was due to the fact that clearances both from the platform edge and for height had to be provided to allow the occasional rail traffic anticipated while the work was in progress. The thrust of the outside edge of the centering was taken by raking tubes back to the main outside row of tubular standards, a horizontal distance of five feet.

A start was made on the hoist tower, bridge and main length of scaffolding. The main support for the roof while under construction consisted of a birdcage scaffold with principal standards at 4 ft. centres with additional standards underneath the transverse beams. Each row of principal standards at right-angles to the platform carried a tube shaped to the curve of the shell, which served both as a template for the scaffolder and as a support for longitudinal runners, on which rested the expanded metal permanent centering. In addition to what are here called the "principal" standards, short lengths of tube from intermediate points along the ledgers connecting these standards were taken up to the longitudinal runners.

While the scaffolding was proceeding, preparations were made for the casing of the centre columns. The bases for these columns had already been put in by the contractor for the main station works, starter bars having been left for splicing into the column. The boxes for the columns were shop-made from 1½-in. wrot boarding with 4 in. by 3 in. yokes held with ½ in. bolts. The columns were poured in one operation up to the springing-point of the shell, the mix used being 1:1½:3, with ¾ in. aggregate. A "Kango" hammer, fitted with vibrator head, was used to assist integration.

Stiffened expanded metal lathing provided a key for the ¾-in. finished rendering, its principal function being, however, that of permanent centering for the 2½-in. constructional shell.

These sheets of expanded metal, delivered bent to requisite shape, were laid direct on the tubular runners. The next operation was the setting out and wiring to the expanded metal of the ¾-in. diagonal bars, followed by a layer of H.T. mesh. Finally, ¾-in. support bars, 12 ft. 9 in. in length, were laid, passing through the stiffening beam, and parallel to the valley. This completed the main reinforcement.

The laying of expanded metal and reinforcement was sufficiently advanced by the fourth week for concreting to the roof to commence. The shuttering for the upstand of the transverse beams was carried out in two operations. The shallow upstand shutter followed the line of the shell approximately 6 in. in height, except where it increased in depth to master the quick sweep of the valley; after this first section of the beam had set, and the side shutters removed to complete the beam, a second shutter was used of sufficient depth to allow clamping over the upstand formed in the first operation. The reason for carrying out this beam in two operations was twofold; first, considerable bracing would have been required for a shutter the full depth without an efficient anchorage at the base, as formed by the shallow upstand, and, secondly, by using the "shallow upstand method" the concreting of the shell could proceed simultaneously, whilst the top section of the beam could be completed when convenient after the shell had been laid.

An operation, complicated somewhat by occasional rail traffic but successfully carried out, was the forming of the 1-in. valance to the shell. Short L-bars at 6-in. centres turned down from the main shell formed the main framework. Woven in and out of each bar was a narrow width of expanded metal, and four longitudinal rows of ¼-in. stiffening bars were wired to the bottom of the L-bars. The valance was finished with a two-coat rendering both sides to a total thickness of two inches.

A 1:1½:3 mix, laid to a fairly stiff consistency and finished with a wooden float, was used for the concreting of the shell. The method used for laying this type of roof was to concrete bays of convenient width across the span, so that the constructional joints then ran parallel to the transverse beams.

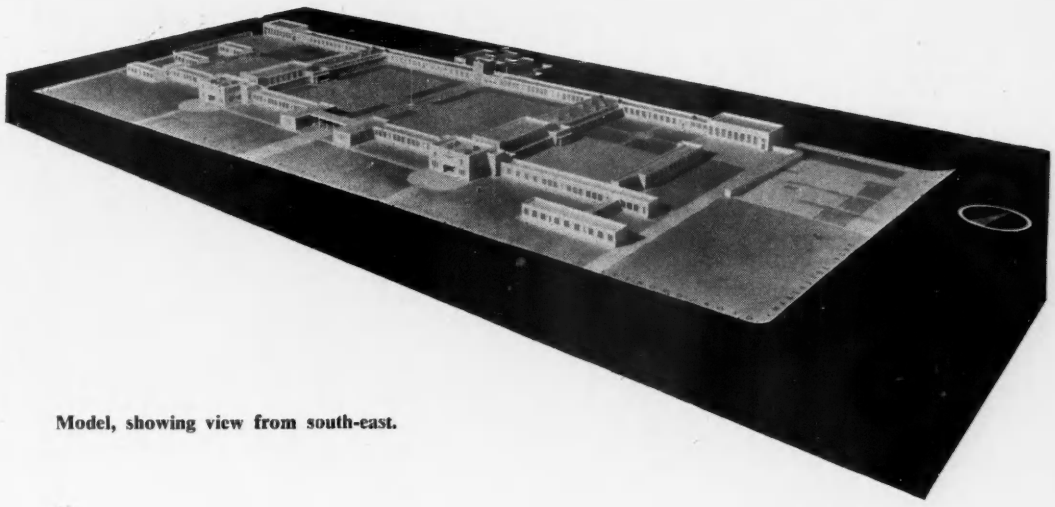
The roof was finished with one layer of mineral-surfaced two-ply bituminous roofing felt, with an additional thickness in the valleys.

A felt skirting was taken up the upstand beams and turned in to a preformed groove. The shell soffit was rendered in cement and sand, and finally decorated with a cream cement wash.

The shelter was completed in eight and a half weeks.

The general contractors for the work were Messrs. Allen Fairhead and Sons, Ltd., of London.

Among the principal sub-contractors were—Reinforcement, "Twisteel" Reinforcement, Ltd.; expanded metal, Expanded Metal Lathing, Ltd.; plastering, W. A. Telling; roofing felt, Neuchatel Asphalte Co., Ltd.; scaffolding, Essex Steel Scaffolding Co., Ltd.



Model, showing view from south-east.

SECONDARY (MODERN) SCHOOLS, CHURCHTOWN, LANCS.

H. D. DODD, F.R.I.B.A., SCHOOLS ARCHITECT, SOUTHPORT

THIS project is to provide two three-stream secondary (modern) schools, each of 450 places, to be built in two phases. The first phase will provide a three-stream school of 450 places, operating as a mixed school until the second phase is completed, the necessary separation of the departments being obtained by temporarily dividing the lavatory, drying and cloakroom accommodation by hollow block partitions which will be removed on the completion of the scheme.

The site is an open one, bounded by the sea embankment on the northerly side, and by Fleetwood and Marshside-roads on the southerly and westerly sides. On the east boundary is the Hesketh Golf Links. The site is level and generally compact sand, the average surface level being 16.00 O.D., and at this level the foul drainage must be by ejectors to the town's sewer and in the case of the storm water by pumping to the foreshore.

The planning is on symmetrical lines, with children's entrances off large inner quadrangles, and all teaching rooms are orientated south-east. Ventilation is natural and obtained by open windows with fully opening clerestory windows above the roof level of the corridors. In addition, the Assembly Hall is provided with extract fans and ducting discharging to atmosphere through the proscenium wall.

The construction is traditional, with load-bearing walls. The ground floor is 18 in. above the general land level and is of "Truscon" precast concrete construction; all roofs are of "Truscon" construction, covered on the top side with "Thermacoust" and three-ply Ruberoid roofing.

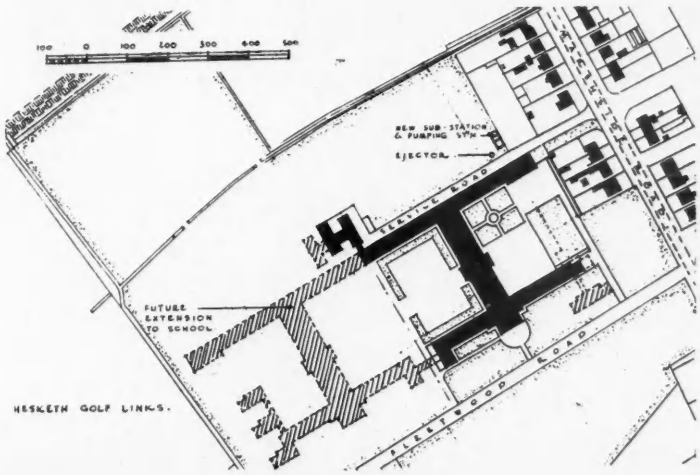
The walls externally are to be faced in Ravenhead multi-colour rustic brick. The corridor floors are to be finished in cork tiles, and teaching spaces generally in 12-in. by 12-in. "Accotile" or Semastic flooring tiles.

The lavatories, drying rooms and cloakroom floors are to be in 6-in. by 6-in. heather brown quarry tiles, and the walls in these spaces are to be finished in 6-in. by 6-in. ivory glazed wall tiling. The ceilings generally are of $\frac{1}{4}$-in. reinforced plaster slabs, finished in Sirapite plaster. Internal walls are to be rendered in $\frac{1}{2}$-in. Portland cement and sand finished in Sirapite plaster, total thickness $\frac{3}{4}$-in. The gymnasium floor is to be of $\frac{7}{8}$-in. rift-sawn narrow tongued and grooved oak boards, secret nailed.

The heating of the schools is by a low pressure accelerated hot-water system from a common boiler house, with automatic stokers, and hot water will be provided to all fittings from an independent boiler.

A tender has been accepted from Messrs. William Eaves and Co., Ltd., of Blackpool, for the first phase of building at £156,896, which, with the cost of playing fields formation, tree planting and garden work, gives a total cost of £160,790 for this phase. The cost of the kitchen servery and one dining hall included in the above figure is £10,119.

The schools were designed by Mr. H. D. Dodd, F.R.I.B.A., Schools Architect, and the model, from which the photograph was taken, is the work of Mr. G. Lenthall, of Southport.



The layout.

SECONDARY (MODERN) SCHOOLS, CHURCHTOWN, LANCS. H. D. DODD, F.R.I.B.A., SCHOOLS ARCHITECT, SOUTHPORT.

TOWN PLANNING SUMMER SCHOOL
The Presentation of Maps

SOME general principles to be observed in the presentation of planning maps to the Ministry of Town and Country Planning, the local authorities and the public were enumerated by Dr. E. C. WILLATTS, B.Sc. (Econ.), Ph.D., and MR. D. R. CHILDS, B.A.(Arch), A.M.T.P.I., in the course of a joint paper read at the Town and Country Planning Summer School at St. Andrews on August 25.

The School was organised by the Town Planning Institute and the chairman for all the sessions was Sir George Pepler, P-P.T.P.I.

Following is a summary of the authors' remarks :—

Most planners would agree that their maps are technical documents intended to be objective statements of facts or intentions and they should therefore be designed accordingly. The aim should be to make them clear and presentable, but not fussy. Quality is by no means to be confused with superficial prettiness. This must be said in view of so many glaring examples of the opposite point of view.

Excessive ornamentation is to be deprecated. It is a waste of time and, therefore, of the ratepayers' or taxpayers' money, and moreover it tends to be distracting to the reader and is a positive disadvantage.

Title and related matters of reference, compilation notes, legend, scale, etc., deserve more attention than they often receive. Some maps are exasperatingly vague, ambiguous and often misleading in this respect. There is much to be said for looking at these matters by considering the points on which a Map Librarian would require to have information. For any given map he wants to know the following facts:

What area it covers; wnat main subject and if necessary what branch of that subject; what it actually shows; who is its author or compiler; from what data he worked; the date of that data and (of lesser importance) when the map was made. He also would wish to know the scale of the map, whether it incorporates other work or is overprinted on other work, for example, a topographical base taken from published sources.

The title will normally indicate the geographical area which the map covers. This may vary from more than a whole country to a city or rural district, but it should be shown. The sub-title is equally important. It should be brief. There is no need to print "Map of....." or "Map to show..... ....." If the reader cannot immediately recognise the thing as a map it had better be withdrawn for further consideration.

Next follows the compilation note. It is a good plan for this to be printed immediately under the title and for it to state briefly, but clearly, who was responsible for the work, what information was used and to indicate if that material underwent serious manipulation. In the case of social and economic data the date of the material is vital : for example, the date of a census or of population estimates or output of minerals. It is desirable to be frank about the sources used: others may wish to investigate them further and one should free one's conscience from any possible charge of plagiarism.

Next comes the question of "legend," "key or explanation." Many of us see no need to print small words above the tablet of symbols and their explanation, for which it is no more necessary than is "Map of....." in the title. The layout of the reference matter is a question of taste and convention. It is well not to scatter the material in too many places and it is desirable to gather it all neatly below the title and other essential lettering, so that, if possible, it is neatly contained within a well-proportioned rectangle. There is much to be said for having a vertical arrangement of tablets with the related brief descriptions running towards them. This ensures a neater arrangement. Obvious symbols need not be included, for example boundaries which are well known or which are obvious because the relevant areas are named on the map. The position of the key is important. It should be well away from the main material of the map so that it is immediately and clearly recognised for what it is.

If short notes are necessary to explain some aspects of the map there should be no hesitation in including them, although it is well to exercise restraint. If used, they should be tabulated at the end of the reference panel rather than interspersed with other reference matter. A good principle to remember is that the map should be a self-sufficient document and that it is less successful if it does not tell its full story without reference to an accompanying text. The map may well illuminate the text but the text should not be necessary to illuminate the map.

Where the map presents data by symbols which are shown according to a properly graduated scale it is often desirable that the scale of the symbols employed should form part of the key. It is important to indicate whether symbols are arbitrarily chosen to represent ranges of units or whether they are carefully graduated on a scale which would permit an exact reading. In the latter case, it is necessary to show a graduated scale of the symbols, such as circles, squares, or whatever they may be.

The Scale.

The scale of the map itself is, of course, important, but should be given no more prominence than is required. A simple divided scale is very suitable. If there is any chance or risk that your map may be enlarged or diminished in scale for purposes of subsequent reproduction it is well to avoid expressing the linear relationships in terms of a representative fraction or a statement of words such as "six inches to one mile." They become immediately misleading when the original is reproduced to a different size. Sometimes a scale of areas is desirable showing acres or square miles and if it is necessary this should be included. There is no special need to put the scale with the other material in a framed or unframed reference tablet and it will often be convenient to place it in some other position.

Another item that calls for comment is the north point. On planning maps it is conventional to show north at the top of the map and to write place names as far as possible in an east and west direction. When this is done there is no need to indicate the north point, although it may be sometimes desirable. The north point is chiefly required if the area is awkwardly shaped and by re-orientating can be made to fit the paper more economically. It is hardly necessary to say that such decorative items as coats of arms should not have a place on a planning map.

Choice of scales is too large a subject to be discussed fully, but one factor may be mentioned. It is important that the finished map can be examined easily. If the subject is too big to be expressed easily on one convenient-sized map it is as well to employ a smaller scale of map to show the whole matter in a general way, leaving the detail to a larger scale map divided into a number of suitable sheets. When this occurs, the word "map" should be restricted to the complete entity, and the word "sheet" to the appropriate portion of a map which comprises two or more sheets.

When maps are designed primarily for reproduction, map or sheet size is a factor of great importance.

Use of Colour.

We all realise that, in addition to enabling more to be shown, the special value of colour on maps is that it permits of much greater clarity in treatment than if they are prepared only in black and white. What is evidently less widely realised is that the greater range of power which colour places in the hands of cartographers needs to be used with great restraint and discretion. By this we mean more than the need to avoid the temptation of increasing the cost of hand copying or printing which is implicit in the employment of a large number of colours but rather that there is a need for an appreciation of some of the more psychological aspects of colour.

Some colours are, by their nature, bolder than others, they even have the quality, to some eyes at least, of appearing to stand out from the surface of the paper. Such colours should for preference be used for subjects which need to be emphasised, while the softer colours should be employed for background data, especially if it is extensive. Some colours are suggestive of certain subjects. In part, this may be due to their having been long associated with them: thus water has been depicted in blue by English map makers for at least 700 years, and over 600 years ago woods were being coloured green and roads in red and yellow. The yellow and green were probably used because they suggested their natural state, while the red was undoubtedly used for emphasis. When such conventions have been long recognised and accepted they should not lightly be rejected, for an ease of mental association has arisen between the particular subjects and the relevant colours.

Another principle to bear in mind is the need to consider clarity and simplicity. Clarity should include the quality of transparency. It is important not to obscure the underlying data that may be printed on your map, and certain colours are very prone to do this, especially when manuscript inks are used. Poster colours are even worse.

Another consideration is the somewhat more subtle one of a mental association more complex than merely recollecting what is conventional. Some colours have the property of suggesting certain associations. Thus, when it is desired to represent on a map both positive and negative factors, such as are involved in depicting increase and decrease of population, the colours chosen should suggest positive and negative values. Thus the positive properties of warmth will readily be associated with tones of red, while greens or blues will be found to suggest more negative values.

A word may be said about the use of colour in relation to symbols. If it is required to show a considerable range of data and to employ a combination of colours and symbols to indicate distribution, size and type, it is important to

realise that the eye picks out colour before it proceeds to appreciate shape and size. If, therefore, we were making a map to show the distribution of different types and sizes of factory, it would be desirable to indicate the main classification by colour showing, say, engineering in shades of red, chemicals by purple, and so on, but not employing more than about 12 different colours. Different types of industry within the main classification can be shown by different shapes of symbols and each shape can be graduated in size according to the significance of the unit which it represents.

When Maps are Needed.

These generalisations on the A.B.C. of presenting maps should have some validity for the maps to be produced by the planning authorities. There are some 146 local planning authorities in England and Wales alone, and their requirements will vary very considerably. Generalisations are, therefore, extremely difficult. Nevertheless, it may be said that each authority will find a need for maps on what may be called four different occasions, which are as follows:

(i) Each local planning authority will need to have maps for drafting purposes at the preliminary stage when development plans are in preparation. These will be needed for committee purposes, for consultations with constituent and other local authorities which arise prior to submission to the Minister. The extent to which this is done will vary from authority to authority, but the provision of an adequate supply of maps at this stage should materially assist the local planning authority in keeping the public informed of its proposals and so to secure a wide measure of sympathetic agreement before they are officially submitted.

(ii) The Survey and Development Plan maps must be submitted to the Minister. As specified by the circular, these documents should be submitted on large scales and with many and complex colours. It will be found that the preparation of these "full dress" maps is a very considerable and tedious task.

(iii) When the Plans are approved, the Act requires that "copies thereof (including reproductions on such scale as may be appropriate of any relevant maps) shall be placed on sale to the public at a reasonable cost." In practice this will mean reproductions which are far less elaborate than the "full dress" originals.

(iv) The quinquennial revisions which are envisaged will require the process to be recommenced, and is therefore likely to call for the same maps, subject to appropriate revision.

It is apparent that this task of preparing maps is a continuing one, and there is much more in it than just preparing copies for official submission to the Minister. It is increasingly clear that if the work is to be carried out efficiently there is a need for each planning authority to "plan its planning maps." With careful thought there is no reason why all the various needs cannot be made from the same basic maps appropriately adapted and overprinted.

In planning offices a single original copy of an important map will rarely suffice, and we therefore face the question of producing copies in sufficient numbers at a reasonable cost in man-power, materials and money. This is not a new problem, but one which all local planning authorities now have to face. The Ministry of Town and Country Planinng has itself recognised this problem and is making some investigations into methods of reproduction of Survey and Development Plan maps.

The investigation has to consider how the basic principles of cartography and map production can be applied to meet the special requirements of town and country planning, the characteristic features of which are:—

(i) The preparation of a series of related maps—for example, a set of County Survey maps.

(ii) Wide variations in demand for copies: only a few copies of a map may be required for use by sub-committee, whereas on subsequent publication possibly hundreds or even perhaps 2,000 general copies may be needed. In addition, it might be to the general advantage if planning authorities were to supply the Ministry with extra copies of maps in order to facilitate inter-departmental discussions of their development plans.

(iii) The need of continual revision in respect of the topographic base and "overprinted" survey information or development proposals.

(iv) A continuous demand for maps since the surveys and development proposals will be subject to periodic review and amendment to keep pace with events.

We think that the planning authorities will find the programme so great that map requirements must be treated as well worthy of planning. The problem should be looked at as not so much a question of how to produce a series of individual maps as how to form a basis whereby all the requirements for maps generally can be satisfied by a co-ordinated plan producing the best effect at the least cost.

Preparing Bristol's Development Plan

SOME details of the comprehensive survey being made in Bristol as a step towards the preparation of a development plan for the city were outlined on August 24 by MR. R. W. JEFFORD, M.T.P.I., deputy city planning officer, Bristol, at the Town Planning Summer School. We take the following extracts from his remarks:—

The conclusion we have reached on this question of survey is that only the information absolutely essential for the preparation of the outline plan and town plan can be available in the required time.

We are grouping the following surveys because it is thought these can be introduced in one survey in the field: (a) Existing Land Use; (b) Age and Condition of Buildings; (c) Net Accommodation Density.

A Field Survey Sheet has been devised for the use of assistants embodying the information on the above, but it is not intended that each officer will be required to fill in all the columns.

Owing to the difficulty of obtaining suitable survey staff some of the persons who carried out the revision of the Electoral Roll have been engaged, and we have placed one of our more experienced officers on the survey section to supervise each group of two or three persons as they proceed with the work in the field. Each one is given notes for guidance on the completing of the Survey Sheets, explaining the groups into which the existing uses should be placed, the age groups of buildings and the classifications into which the condition of buildings fall. They are also supplied with an introduction card explaining the work on which they are engaged and the authority for seeking permission to enter upon property.

It may be of interest to quote the classes we have used to ascertain the condition of buildings.

P. (Poor): Already condemned, or would be scheduled for demolition under Housing Acts if practicable, or extensively war damaged. F. (Fair): Undesirable—to be retained for a maximum period of 10 years. S. (Sound): Buildings with reasonable life of 10-20 years. G. (Good): Buildings with estimated life of over 20 years.

As regards "P" and "F," advice is being sought from the Medical Officer of Health, who is making a survey of these classes of buildings which are used as dwellings.

The inclusion of buildings listed under "F" is of extreme importance because when they form into a large block of buildings it may indicate blight or obsolescence, and it would seem feasible to include some of them in an area to be acquired compulsorily.

Generally speaking, the "Age of Buildings" Map can be completed from the comparison of Ordnance Survey maps issued at specified dates, but care is being taken to note when new buildings have been erected in place of old, but upon the original site area. The dates we have adopted to suit our Ordnance Survey publications are as follows:—Prior to 1883; 1883-1914; and 1915-1949. The field survey will serve as a check on this map, as will also the reference we shall make to our Plan Registers.

We are obtaining as much information as possible on the "user survey," such as the types of dwellings, types of shops and factories and number of storeys of buildings, together with remarks where buildings are of special note.

The city wards have been adopted for the purpose of dividing the city into areas for the survey and then subdivided into sections which we considered represented typical types of existing development. The central area upon which the reconstruction scheme is being based will be specially surveyed under the supervision of the reconstruction officer in such a way that certain of the information can be merged with the general survey.

The Accommodation Survey.

After giving some details about ascertaining population density figures, Mr. Jefford referred to the accommodation survey. He said: The method of arriving at the present accommodation in the area in order to assess the housing needs of the future suggested by the Ministry, seems sound, namely, the basis of habitable rooms per acre.

The information is fairly readily obtained, and the maps Bristol has prepared showing the grouping of houses of equal density will suffice, generally speaking, for the survey, as it only remains to ascertain the number of habitable rooms per house in each group to arrive at the figure required.

There are, however, such areas as Clifton, where the method cannot be applied, and we are in these cases carrying out, in due course, a house-to-house survey to obtain more accurate data for this district.

Considerable thought has already been given to this and the relation to the rest of the development plan.

As far as roads are concerned, there is a need for early guidance from the Ministry of Transport on trunk roads and widths of classified roads, existing and proposed.

Fortunately my department has kept

very closely in touch with the Ministry, and many of the projected schemes for roads have been provisionally agreed. Some knotty problems remain, such as by-passing existing shopping thoroughfares along main roads, but no extensive survey is now called for, only test figures of traffic flows at certain points where the lines of roads have not been agreed.

Railway and Air Transport Surveys.

I do not think that any survey by my department of railway facilities or air transport is called for, as they are specialised matters now under Government control, but close contact will be necessary before the plans are formulated. Take, for instance, the question of helicopters as a future means of transport. It is appropriate that this should not be overlooked in Bristol, seeing that the city is somewhat of a pioneer in the production of this type of aircraft, and regard will be given to possible landing areas, particularly in central areas, although we understand that the road motor vehicles will not be seriously challenged for many years to come.

Fortunately the question of public service vehicle routes has already been considered in conjunction with the principal company and there is no need for a survey. But stations have also been tentatively agreed, as have the main car park sites, including the erection of a multi-storey car park building.

It is of little use considering the zoning proposals until the question has been settled of suitability of land for development, particularly as regards drainage.

Some few years ago Bristol prepared a comprehensive scheme for main drainage, and the Ministry of Health have accepted in principle a scheme indicating how the sewage and storm water of Bristol and the adjoining districts can be dealt with as one complete co-ordinated operation, providing one main discharge outlet of sewage into the large tidal waters of the River Severn instead of the many uncontrolled discharges into the River Avon and the number of small sewage works that exist at the present time.

The information obtained in preparing this report places at the disposal of the planning officer a speedy answer as to whether development can reasonably and economically take place from the drainage point of view or whether it should be avoided. The detailed design of the scheme can, of course, be adjusted from time to time to fit in with various policy changes as development takes place.

Historic Buildings.

A provisional list has been drawn up, by the Ministry of Town and Country Planning, of the historic and architectural buildings, and very careful consideration is being given to this. The Ministry of Town and Country Planning have been extremely helpful in that they have indicated that, as far as a class III building is concerned, the decision to retain or remove is one for the city authority, and that if major planning considerations affect the class II buildings, these may also be deleted from the list by the Ministry. Generally speaking, the class I buildings will have to remain in the list unless there is a very special reason to interfere with them.

The need for fuller information on shopping areas is apparent when so much variation exists in the views of experts on the needs of the community. The "user survey" will reveal many facts, but what is hoped will emerge from a detailed survey will be the areas which existing shopping groups serve, the inadequacy or overloading of shopping facilities and a standard upon which to base the areas of new shopping zones in the plan. One of the problems in built-up areas is the existence of isolated shops and corner shops, and whilst they serve a useful purpose, they may not fit well into any scheme for redevelopment of a worn-out area. It is expected that much assistance will come from the retail trades associations in the city and the Chamber of Commerce, with whom the corporation have a close liaison.

Fortunately in Bristol we have, in co-operation with the Ministry of Town and Country Planning, the Board of Trade and the Ministry of Labour, set up a working party on industrial zoning. The Committee has already approached the Chamber of Commerce, who have agreed the form of questionnaire to be issued to all industrialists. It is a comprehensive one and will give us sufficient data to guide us on the zones to be provided in the scheme.

A similar survey was carried out in 1945, but it was felt that this should be brought up to date. My department has prepared the list of firms to be approached, and will give all assistance in the completion of the forms. Those listed are the firms which would ordinarily be permitted to develop in the industrial zones under Use Classes Order, and not based on the Board of Trade Classified List, as many of these are commercial in character and do not carry out manufacturing processes. As areas for warehouse and wharfage buildings will be zoned, a revision of the commercial survey previously made will be made again in the form of a questionnaire to the trade, and already that for portions of the central area has been completed to assist in the resiting of warehouses destroyed by enemy action.

The industrial survey will not be limited to the city area, but will relate to the region under the control of Regional Ministry of Labour.

Social Services.

Inexhaustible investigation could be carried out under this heading, much of which, whilst helpful, cannot be regarded as essential to the preparation of the plan, and it is proposed to limit the scope to schools, clinics, baths and community centres. The important necessities of good living have been prominent in our thoughts lately—particularly schools and the very increased standard demanded under the Education Act, 1944.

The City Education Committee have prepared their development plan, and our task is to relate this to our neighbourhood planning. We do not propose to carry out a further survey on this subject, nor do we in the matter of clinics and baths, which the respective committees are investigating.

As regards the churches and chapels, my authority have already discussed the present position and future requirements with the Diocesan Reorganisation Committee and the Free Church Council, and these discussions will continue during the formulation of the development plan.

The Ministry also require considerable detail of the reconstruction proposals for the built-up areas and mention must be made of this.

This is where the problem looms large, for it involves matters such as licensed premises, office zones, central shopping area reservation and civic buildings.

Mention must be made of the vexed question of "Floor Space Index" survey. I have heard it said that the monotony of carrying out such a survey is almost enough to upset the section of staff engaged on this task.

The job is a heavy one and the results, whilst helpful, not always worthy of the work entailed. Bristol has carried out a floor space index survey for the main business centre within the Inner Circuit Road, but much of the information was based on Goad's maps, as being the only source to show where property has been destroyed. It becomes rather complicated when the users are so mixed. Apart from some local centres, I do not think this survey is necessary beyond the central area, and to carry it out the concentration of four to six officers over a period of months is necessary.

OBITUARY

Herbert H. Wigglesworth, F.R.I.B.A. (Ret.)

It is with regret that we record the death at the age of 83 of Mr. Herbert Hardy Wigglesworth, F.R.I.B.A. (Retired).

Mr. Wigglesworth, who was born in 1866, started his architectural career in the office of Ernest George and Peto, and subsequently set up practice in partnership with the late D. Barclay Niven.

This partnership was responsible for a number of notable buildings, particularly in the London area. Among them was Hambro's Bank, Bishopsgate, which set a new style in the design of London banks. Mr. Wigglesworth's design for the offices for the Swedish Chamber of Commerce in Trinity-square brought him recognition from the King of Sweden, who bestowed upon him the Order of Vasa. He was responsible for a good deal of domestic work in Surrey and also for the design of the East End Sailors' Mission building.

The partnership was dissolved in 1927 and thereafter Mr. Wigglesworth collaborated with Mr. A. G. R. MacKenzie in the design of several buildings.

After his retirement, Mr. Wigglesworth, a gifted artist, occupied himself with water colour painting and was an active member of two Sussex art clubs.

Mr. Arthur W. Kenyon, C.B.E., F.R.I.B.A., M.T.P.I., writes:—

The death of Herbert Wigglesworth at the age of 83 years sees perhaps the last of a past generation of architects whose influence on architecture was very great. His contemporaries, Lutyens and Baker, both worked in Ernest George's office, who himself was a very great scholar. Norman Shaw was older and his work was influencing the younger men of that day.

These names are receding, and to the younger men may not even be known.

I came to London as a very raw Provincial and was taken into his office at a very modest salary. The partnership was then Niven and Wigglesworth.

In this office I discovered that design was studied in three dimensions. Each principal had his own method—Niven, dynamic, enthusiastic, a terrific worker and a beautiful draughtsman. Wigglesworth, quiet but certain when he had achieved what he was aiming at, a keen student of art and a lovable character: his charm influenced all who worked under him. He was extremely patient with his staff, and seemed to pour out his thoughts to the draughtsman who was working for him, so that he was able to interpret them.

Everyone who came under the influence of these two great men could not fail to appreciate the help they derived from their association with them.

Perhaps with the school training where architecture is taught, the influence of the principal is less important. To me, however, it was a revelation to work under Wigglesworth, and I shall always owe him a great debt for his kindness to me.

THE ORGANISATION OF BUILDING FIRMS

Below we publish the eighth in our series of articles on the organisation of building firms. The business described is that of a Midlands city firm employing 50 to 75 men.

8.—A Midlands City Firm

ACCORDING to 1948 statistics the smaller medium-sized building firms employ nearly 300,000 operatives out of something like a million operatives in the industry. The following article gives some particulars of the organisation of a typical firm of the smaller medium-sized class.

The firm has been in operation as a limited liability company for 24 years and is mainly a family business. All types of building works are undertaken—new commercial, domestic, and factory jobs; repairs, alterations, general maintenance, and painting and jobbing. Contracts are usually under £15,000, and the majority are of the £5,000 to £10,000 kind. Most of the work undertaken is within a radius of 25 miles, but jobs further afield were undertaken previous to 1939.

Operatives directly employed are bricklayers, carpenters, joiners, plumbers, and painters. Other trades are usually sublet to specialists. Most of the joinery is prepared in the firm's own workshop. Mechanical plant—other than mixers and hoists—are hired as occasions demand.

The principal and founder had 20-odd years of experience as surveyor and executive with firms in the Midlands and south of England before commencing the business, and his experience comprised a wide range of work from jobbing to fairly large contracts—but mostly of the £5,000 to £10,000 type. In addition he had some fair experience of lecturing at technical colleges on various building subjects.

The commencing capital was of very moderate dimensions but profits have been ploughed back into the business over the years, and the working capital is now several times the subscribed capital.

The business is—as is the case with most firms of this type—largely personal. The executive staff consists of :—

(1) The Principal and Founder.
(2) The Inside Manager.
(3) The Surveyor.
(4) The Outside Manager.
(5) A staff of two female shorthand-typists.

When the business was formed a foreman bricklayer and a foreman carpenter were appointed as working directors. The foreman carpenter has since become the Outside Manager.

In businesses of this size, one of the greatest advantages is that most of the operatives are known personally to the Principal and many of these men have been with the firm for many years.

The firm has usually one apprentice to bricklaying, carpentry and plumbing.

A conference between the Principal, Inside Manager, and Surveyor is usually the prelude to the day, and the Outside Manager reports to the Principal at night. The Principal is well acquainted with all the contracts, and visits all jobs two or three times a week. He obviously is known to architects, quantity surveyors and clients.

The administrative work is roughly allocated as follows:—The Principal is the key man, and has general overall supervision of all aspects of the business, but allocates details to the staff.

The Inside Manager—who is also Secretary of the Company and an A.I.O.B.—undertakes the general supervision of the office, and is responsible for book-keeping, prime cost, wages and P.A.Y.E., insurances, Government forms and licences, haulage, jobbing accounts, banking and cash position, and buying, and also assists with placing of sub-contracts. He also undertakes the marking off of sub-contracts from bills of quantities and obtaining sub-estimates and material prices for the surveyor's pricing. He also peruses all contracts and, if necessary, seeks advice from the firm's solicitors. In other words, he is responsible for all the inside work of the business.

The Surveyor, who was articled to a professional quantity surveyor, and has several years' experience, as has the Principal, is responsible for the taking-off of quantities for works under £1,500, and for pricing in bills of quantities. He takes charge of all outside measurements and is responsible for interim certificates and final accounts. When the Principal is not available he will meet architects, surveyors and clients, as occasion arises.

On the acceptance of any estimate a complete list of plant and material for the work is taken out, and from this a progress chart is prepared if the size of the contract warrants it, otherwise plant and material delivery schedules are prepared.

The Outside Manager visits most jobs each day, and as a craftsman and foreman is always available to give guidance on any intricate or difficult work.

One of the greatest difficulties in the organisation of a business of this kind is the absence of a chief executive through illness or holiday. The solution to this problem is found by interchange of duties by the chief executives, and in this firm this is quite practicable, as each executive has a sound general knowledge of all branches of the building trade, and of all the problems involved in running the business.

Another disadvantage met with is that as the business is so largely personal the Principal is always on call. This is gradually being overcome, however, by the fact that the Surveyor and Inside Manager are the sons of the Principal and the same name is an advantage. In spite of his wide range of duties, the Principal has been able to do much Association work, and the Inside Manager has found time to lecture on building subjects at a technical college.

On the principle that the main point of organisation is that essential material and plant in required quantities should be on the job at the right time, the frequent visitation of all jobs is of great value. The organisation is considered to be capable of expanding to 100 operatives without alteration of principals, but additional clerical help might be required.

Before the war it was a general rule to have the costs of each job presented up to the previous week for comparison with the work completed, but owing to the delay in receiving invoices this is now dealt with on a labour and haulage cost.

It is felt that for works within its range the firm is well organised and that the personal contacts all round provide one of the greatest assets in maintaining goodwill within the industry.

SEWAGE DISPOSAL IN COASTAL TOWNS

Problems Confronting Local Authorities

SOME of the difficulties with regard to the purification of sewage that confront the responsible authorities in coastal areas were described by MR. ROBERT L. GEE, A.M.I.C.E., Deputy Borough Engineer, Woolwich, when he delivered a paper entitled "Problems of Sewage Disposal at Coastal Towns" at the Health Congress of the Royal Sanitary Institute, held recently at Brighton.

Mr. Gee, who was formerly chief assistant engineer in the Borough Engineer's Department, Brighton, spoke at some length on the system of sewage disposal adopted in that town in particular and then referred to the treatment of sewage, especially desirable at holiday resorts in the summer months, before discharge into the sea. Following are extracts from his remarks on this subject:—

Sewage discharge into the sea may cause an area of discoloration, referred to as the sewage field. The conditions favourable for the formation of a sewage field are a calm sea, no currents and cold sea water. Sewage has a lower specific gravity than sea water and when the latter is colder the sewage tends to float on the surface. A temperature difference of as little as 2.5 degrees F. may be sufficient to cause stratification.

The extent of pollution may be determined by a bacteriological survey. It is found that the sewage field disappears at about the point where the *Bacillus coli* count is reduced to 10 per c.c. There are apparently no standards in this country as to the purity of the sea required for bathing purposes, but Californian health regulations require that there shall not be more than 10 *B. coli* per c.c. This standard, however, would not be accepted in a bathing pool.

One of the first problems which arises is the determination of the flow of sewage. It would perhaps seem axiomatic that a sewage disposal authority should know how much sewage it is dealing with, but in the case of a simple outfall there is no point in keeping such records. With the treatment of sewage in mind, however, it is necessary to know accurately the volumes involved, and difficulties arise in designing measuring apparatus suitable for the purpose, especially where a sewer is at times tide-locked and the outlet drowned. At the point where it is necessary to measure the flow the sewer may discharge freely at low water, but as the tide rises the outlets will assume drowned conditions, then a slight reverse flow until the tide valves operate, after which the sewer may back up as it is filled by the discharge of sewage higher up.

The simplest form of treatment is the use of raking screens with ¼-in. bar spacing to remove the larger solids and prevent to a great extent any visual evidence of pollution on the seashore. The effluent may be improved by the use of fine screens following the raking screens and this method is employed by a number of authorities. The fine screens take the form of constantly revolving perforated drums from which the screenings are washed by water pressure. It has been found impracticable to use screen openings less than ¼-in. diameter.

To take the treatment a stage further it is necessary to introduce settling tanks,

and a system consisting of detritus channels and settling tanks, giving one to two hours' detention, should settle out most visible solids and purify the effluent considerably. The prevalent use of soapless detergents may have an adverse effect on the settlement and chemical precipitation may be required or the tank capacity enlarged to provide longer detention.

As supplementary treatment after either screening or settling, it may be desirable to chlorinate the effluent to reduce the biological oxygen demand and to assist odour control. Difficulty is experienced in making biological oxygen demand tests in the vicinity of a sewage outfall, as the results may be confused by the high demand of the raw sea water itself due to decaying seaweed and marine life. In Cleveland, U.S.A., it was found that chlorination of a treated effluent not only eliminated *B. coli*, but the biological oxygen demand was so reduced that it was evident the chlorination was having a beneficial effect on the raw lake water. With a chlorine residue of 0.2 to 0.5 p.p.m. a reduction in biological oxygen demand of 25 per cent. to 40 per cent. may be expected, but a residue above 0.5 p.p.m. does not effect proportionally greater reductions.

It is evident that for efficient working the economic dosage must be applied and this can be done fairly accurately by a timing device which injects a predetermined dose in accordance with the forecast quantity and quality of effluent to be treated. At the Brighton outfall the chlorine could be delivered to a storage building at the cliff top and the difference in head would be sufficient to pass it through the diffusers without the use of injector pumps. The best results would be obtained by full treatment works, but this should rarely be necessary.

Disposal of Sludge.

Both the settling tank method and full treatment works leave sludge which, near the foreshore, is likely to be difficult to dispose of. One suggestion is to pump it a really long distance out to sea, say, five or six miles, through a "Pluto" pipeline, and this is worth further investigation. The sludge can be pumped back inland and treated in a more conventional manner. Emphasis is at present being placed on the conservation of our own natural resources and consideration has been given to composting the sludge with straw or other material to form a fertiliser. This has been done for some time on a small scale and experiments show that the compost can have good fertiliser value, although not equal to farmyard manure. The screenings could economically be carried inland, after dewatering, by tank truck and either buried or composted in the same way as the sludge.

The installation of full treatment works or sludge disposal works is complicated if the treatment is to be seasonal only. For example, it is not practicable to stop and start activated sludge plant each year, and leave it idle for six months. In the same way a sludge digestion plant, possibly with the collection of gas to produce power for pumping, is not suitable for seasonal working. On the other hand, with normal sludge drying beds it would be advantageous to receive sludge only in the summer months.

Siting is likely to be a further problem at coastal towns, especially holiday resorts where the foreshore is one of the attractions. Screening plant can be installed in underground buildings provided with artificial ventilation, and there is no reason why settlement tanks should not be similarly covered.

BUILDING SOCIETIES' CONFERENCE

Opening at Salzburg

THE European Conference of building societies opened at Salzburg, Austria, on August 30. MR. W. W. WETHERILL, J.P., leader of the British delegation, presenting a report on the development and present position of building societies in Great Britain, said that between the two world wars British building societies helped over two million people to buy their homes and lent for this purpose over £1,500 million.

The number of houses which could be built for owner-occupation in Great Britain was at present severely restricted, but of those which had been built, the great majority had been bought with the help of building societies. These societies had also enabled large numbers of tenants of houses built before the war to buy them from their landlords, and this development of the ideal of home-ownership might be expected to continue.

"In addition," Mr. Wetherill declared, "there are widespread hopes that before long there will be greater freedom for the erection of houses for owner-occupation, and when that time arrives building societies will be ready to provide large sums to enable people to fulfil the natural and wholly laudable desire to become the owners of their own homes."

Reviving Interest.

SIR HAROLD BELLMAN, J.P., addressing the conference, said that not the least encouraging of the signs that Europe was slowly recovering from the havoc of war was the reviving interest in the building society movement on the Continent of Europe. "As we survey Europe to-day, one of its outstanding needs, from the economic standpoint, is for intensive thrift," Sir Harold declared. "Modern wars involve devastation on a vast scale, but at the same time they have the effect of stimulating the desire for a higher standard of living among large numbers of people. Clearly, the accumulation of capital is a necesary prerequisite for any such reconstruction and improvement in the standard of living. All the evidence, therefore, combines to emphasise the urgent necessity for the practice of thrift on the widest possible scale. In these circumstances, there should be wide scope for a properly organised building society movement in every country which is faced with this problem."

DIRECT LABOUR AT WOLVERHAMPTON

Borough Surveyor's Report to Council

THE work of the Direct Building Department of the Wolverhampton Corporation is referred to in a recent report submitted to the Town Council by the Borough Engineer, Mr. W. Mervyn Law, M.B.E., A.M.Inst.C.E., A.M.I.Mun.E.

The report disclosed that there were then 410 men employed in the department, including apprentices. Trade discounts secured amounted to about £2,000 and a saving of £5,000 was effected in the purchase of materials.

Mr. Law added that a great deal of credit for the success so far achieved was due to the keenness of the men, who had appreciated benefits and facilities, which included bonus payments, canteens, protective clothing, a voluntary benevolent fund and a joint works committee.

At a meeting held in July last Wolverhampton Council referred back a proposal that the department should erect about 100 more houses on the Willenhall-road North estate.

COUNCILLOR G. T. WILLIAMS, who moved the reference back, said that it was fair to assume that the Council would have to pay over £4,000 more than if the houses were built by private builders.

VALUED POLICY

Calculation of Compensation for Partial Loss

From a Correspondent

AN important judgment on what may be regarded as a new point of insurance law affecting property was recently delivered in the High Court in *Elcock* v. *Thompson*.

In this case the parties had agreed the value of certain premises which were being insured against fire at a sum of £100,000. The premises were damaged by fire and were not reinstated, so that the case was one of partial loss.

The cost of reinstatement would have amounted to £40,252 and had the insured owner put the work in hand he clearly would have been entitled to recover this sum, for it fell within the figure of £100,000, which was the maximum sum for which the insurance company could have been liable under the policy. But the property was not reinstated and the damage was not made good.

The question accordingly arose as to the amount which the owner could recover. The difficulty that was raised in this case was the fact that the property was of a far less value than £100,000. Its actual value before the fire was £18,000 and its actual value after the fire in the condition in which it then was, was £12,600, so that the diminution in its real value amounted to £5,400.

The court came to the conclusion that the principles of marine insurance law were applicable to such a case and that accordingly one was not entitled to depart from the agreed value because there had been merely a partial loss.

Various suggestions were made as to the basis on which the payment to be paid out to the insured for his loss should be calculated. The court finally came to the conclusion that the first step in the process of the calculation was to consider the proportion which the actual diminution in the value of the property—namely, £5,400—bore to the actual value of the property before the fire—namely £18,000. This proportion was accordingly $\frac{£5,400}{£18,000}$ = 3/10ths.

The next step in the process was to apply this proportion to the agreed value of the property, namely £100,000, since no departure was permissible from such agreed value. Accordingly the amount that was recoverable under the policy for the loss was three-tenths of £100,000 = £30,000.

It will be observed, no doubt, that in this way the insured was entitled to recover from the insurers a sum which was almost double the amount of the actual value of the property in its undamaged condition before the fire took place.

SPECIALISED INSTRUCTION

Does General Education Suffer?

THAT the time had come to re-assess the functions and the responsibility of the educationist on the one hand, and industry on the other, was a view expressed by MR. T. A. STOREY, chairman of the Timber Development Association, Ltd., when he addressed, on August 19, instructors attending a course on timber technology at Cambridge University.

Mr. Storey posed the question whether, in his efforts to keep abreast of technical development, the educationist had neglected the essential basic requirements of all young people—i.e., good character and a capacity for individual thought. Other points he raised were as follows :—

Have we not tended to produce educational robots, churning out results in much the same way as a calculating machine, and with as little appreciation of eventual consequences as it has of the fundamentals of human need? I can deal now only with the question of specialised instruction, its effect on our lives and its place in the educational field, and the first point I put to myself is whether, assuming specialisation has come to stay, our timing has had sufficient regard to the overall necessity of ensuring what is known as a "liberal education." The second, whether industry in the past has not set the educationist an almost impossible task in expecting him to produce within a relatively short period and at one and the same time a being capable of individual thought and yet with specialised knowledge of service to a particular industry or profession.

If you do not like the suggestion that industry itself has set the task, then has not the educationist himself bitten off more than he can chew, and is he not in danger of pursuing the more obvious utilitarian aim of specialised knowledge rather the less tangible but more important one of general education?

What does industry expect from the educationist? When should specialisation begin?

I know what the average business man wants. If our educational system can provide a supply of young men and women of integrity, capable of individual thought and judgment, and with the moral courage without which the rest are of little value, then it will have carried out its essential aim, and industry and the country will be for ever in its debt.

It seems to me that at this point we have gone wrong. It has been assumed that it is not only possible but that it is the function of the educationist to turn out on to the labour market individuals at various stages of advancement suitable to their immediate position in the industrial field, all assured that in their knapsack they carry a field-marshal's baton, but specifically trained as if their horizon were the sergeants' mess at most.

When we ought to have been well content with an influx of young blood into industry capable of individual decision and of practised integrity, we have given an inflated value to a few cheap tricks designed to display what at best can only be a superficial knowledge of the requirements of industry, and which, in most cases, has to be unlearned when actual contact with commercial life begins. The curriculum has been overloaded to an extent which renders it impossible to do any one thing adequately.

The remedy is to ensure that during the formative years of youth, emphasis—overwhelming emphasis—is placed on those aspects of education which go to form character, even if by so doing we have to neglect something which has an immediate attraction in the workaday world.

In other words, we have to ensure that the spirit of the public school at its best permeates the whole of our educational system. Thus the boy and girl coming to industry may possibly lack a little superficial knowledge applicable to commercial practice, but they will know what is right and what is wrong; they will be able to speak and act as rational beings, and they will cease to be such an easy prey to the pernicious propaganda which has already plunged the world into one catastrophe and may easily cause another.

That something may be lost is probably true, but I suggest that it would only be ground which can be recovered quickly if industry plays its part. If the educationist can provide us with the right material, surely he will have done his job, and it is our business to offer specialised educational opportunity for those who stake their future in our industry. Surely by doing so we shall be ensuring that educational progress is kept in its proper perspective and rotation.

To those whose talents lie more on the professional side there is the university and the field of higher education: here, in our timber trade, is an example of what can be done in commercial instruction if an industry itself, as it is best equipped to do, really tackles the job. Here, based upon the sure foundation of a good liberal education, we can supply all the specialised knowledge that is required, even in this highly competitive era. Is it not possible for industry, as a whole, to follow this example? Can we not apportion, with much greater exactitude than in the past, the functions of general education on the one hand and specialised instruction on the other, allotting to each its proper place without having to ask one machine to perform a function for which it was never designed and which in any case could be far better performed elsewhere and at another time?

BUILDING APPRENTICESHIP

A London Conference

A FULL day's conference on Apprenticeship is to take place at the headquarters of the National Federation of Building Trades Employers on September 6. The chair at this meeting will be taken by the President of the N.F.B.T.E., Mr. Norman Longley, M.I.O.B. In addition to three representatives of each Regional Federation members of the National Federation's Education and Training Committee and the Federation's representatives on the National Joint Council's Special Committee on Apprenticeship Review and its members on the National Joint Apprenticeship Board will be present.

Among other matters that will be discussed will be the period of apprenticeship; the consequences of the National Service Acts; apprentices' wages and apprentices' attendance at classes.

The conference will also consider the working of the present Apprenticeship Scheme, with particular reference to financial matters; liaison between local and regional Apprenticeship Committees and their appropriate educational authorities and will also investigate whether there is a case for putting into effect the existing provisions under Paragraph 9 of the Apprenticeship Scheme for the setting up by the National Joint Apprenticeship Board of a register for building crafts apprentices, etc.

NEW TOWNS NEWS

Stevenage Master Plan

THE master plan for the new town at Stevenage has been submitted to the Minister of Town and Country Planning. Stevenage residents will have an opportunity to see the plan and a public inquiry is to be held for the hearing of objections.

Stevenage Urban District Council has already objected to the proposed site for the new town's centre, thus preventing the Development Corporation from proceeding with the construction of a loop-road giving access to housing sites. Work is likely to begin on two other roads within a couple of months.

Two hundred and seventeen workers' flats will comprise the first batch of buildings to be erected for which the corporation expects to let the contract by the end of October. The largest block, of about 72 dwellings, will be seven storeys high. The ground floor will contain laundries, stores, perambulator sheds and workshops. Lifts will also be installed.

Notice to Crawley Shopkeepers.

Formal notice to treat has been given to occupiers of shop premises in the centre of Crawley, Sussex, by the Crawley Development Corporation. Compulsory purchase orders have been made in respect of most properties in new towns, but this is the first order applying to shop premises. It means that the Development Corporation will become landlord of the principal shopping centre in Crawley, an arrangement that many local traders do not favour.

Only one-fifth of the total number of shopkeepers concerned are owner-occupiers. The Corporation has taken this step so that future expansion in the area may be controlled.

Peterlee Appointments.

The Minister of Town and Country Planning has appointed Coun. Douglas Nicholson, Mr. Thomas Haworth, and Mr. C. S. Robinson as members of the Peterlee (Durham) New Town Development Corporation.

Development of Letchworth.

The Minister of Town and Country Planning has intimated that, subject to certain conditions, he considers the First Garden City Company a suitable instrument to complete the development of Letchworth.

These conditions are embodied in the resolutions to be submitted at a meeting to be held on September 15 and provide *inter alia* that (1) two directors chosen from a list submitted by the Minister be appointed to the Board; (2) a formal affirmation be made of the intention that the town of Letchworth shall eventually pass into public ownership; and (3) the memorandum of association be amended.

Sir Eric Macfadyen is chairman of the Company.

W.D. BUILDING OPERATIONS

THE Ministry of Works has begun to rebuild and enlarge Tidworth Barracks, Salisbury Plain, put up about 50 years ago. This is part of a long-term plan to provide modern accommodation for a larger number of troops in an area where an unrestricted manœuvring space is available.

Excavations have been started in a £630,000 scheme for 230 houses at the new Army camp site in the neighbourhood of Blandford, Dorset. The provision of other permanent camp buildings is contemplated.

TECHNICALIA

PLUMBING. By Ernest G. Blake. Fourth edition. Pp. 336 with 226 illustrations. (Technical Press, Ltd.) 17s. 6d. net.

THIS is a revised and enlarged edition of a well-known technical manual which was first written by W. P. Buchan in *Weale's Rudimentary Series* in the nineteenth century, and then entirely rewritten in two volumes by Mr. Blake in 1923 for Messrs. Crosby Lockwood and Co. The series has again changed hands since that date, and Mr. Blake's work has been successful enough to call for a fourth edition—the book now under review. As he remarks in his preface, many of the principles of lead-laying and of rainwater drainage have altered little since his first edition, but there has been a tremendous advance in the design of sanitary appliances; and demarcation lines between different trades have greatly limited the plumber's province since Buchan's time. Many numerous illustrations from the earlier editions have, therefore, been retained, but many more are entirely fresh, including new types of water-closets, hydraulic rams, gas fires and zinc roofing. The text has been completely revised, partly rewritten, and lengthened. There is, however, no mention in the index, and apparently no description in the text, of several important features of modern plumbing and sanitation, e.g., the "one-pipe" system of drainage, electrical immersion-heaters for hot-water cylinders, stainless steel sinks and draining boards, plastics for w.c. seats and flushing-cisterns. Incidentally, there appears to be no reference to the numerous British Standard Specifications for many of the materials and appliances described. These omissions detract seriously from the value of an otherwise useful book, and could easily have been incorporated in it, without increasing its bulk, by the deletion of obsolete matter.

M. S. B.

AIR CONDITIONING. By Herkimer and Herkimer. (Chapman and Hall.) Price 40s.

MANY books have been written, in recent years, on this and allied subjects, but few have discussed this subject in the manner adopted by these authors, who have made their approach from a somewhat different angle from that generally followed. They commence by expounding in considerable detail the physics and chemistry of gases and vapours dealing, in simple terms, with the principal laws involved, including those of Boyle, Charles and Avogadro. This is followed by consideration of the physical and chemical properties of matter, leading to absorption, changes of state, heat transfer and heat transmission.

From this useful groundwork the reader is introduced to the mechanics and practice of air conditioning, both for domestic and commercial purposes, and each phase of the many problems facing the engineer is assisted by an abundance of theoretical and scientific detail, with the result that the reader is given not only a practical guide to design and installation of air conditioning apparatus, but also a really valuable text-book on both elementary and relatively advanced physics in connection with gases and vapours.

The whole subject matter is up to date and the reader should be able to find an answer to almost any problem with which he is likely to be faced in his practical work. He will find much that will interest him on the subjects of heating, cooling and refrigerating, humidifying and dehumidifying, air distribution and the necessary automatic and other controls.

In conclusion, a helpful guide is given on the estimation of costs, and in an appendix will be found a very useful glossary of terms and of graphical symbols for the aid of the draughtsman.

HOT WATER ENGINEERING. By E. Molloy. (George Newnes, Ltd.) Price 21s.

FOR comparatively small domestic hot-water supply systems, rule-of-thumb methods based on experience may, in the majority of cases, suffice for determining the type of system to employ, pipe sizes and other requirements. Nevertheless, the present tendency is, or should be, to design the system and plant required for each individual case, a course which obviously must be adopted for all larger installations.

Whether a small or large installation is under contemplation, the hot-water engineer will find in this book all the information he needs to enable him to settle upon a suitable system and to make all the calculations necessary for the job in hand.

The author has presented the reader with an understandable and easily read textbook which should give excellent guidance to the engineer, architect and also the student.

In addition to the matters just mentioned, a large volume of information is available to the reader on the subjects of boilers, tanks, cylinders, calorifiers, gas- and electrically-heated appliances, accompanied by ample illustration throughout.

In this second edition opportunity has been taken to bring all technical data into line with the new British Standards and Codes of Practice that have been more recently published. There is a useful appendix of British Standards relative to hot-water supply, and numerous tables for assistance in necessary calculations occur throughout the text.

HEATING AND AIR CONDITIONING EQUIPMENT FOR BUILDINGS. By F. Burlace Turpin. (Sir Isaac Pitman and Sons, Ltd.) Price 30s.

MODERN conditions have led to considerable advance in arrangements for the comfort and well-being of occupants of buildings of all kinds, and in consequence much has been written recently on the subject of air conditioning; but, unlike most authors in this field, Mr. Turpin has addressed his book more particularly to the benefit and advice of users of the requisite apparatus rather than to those responsible for the design and installation. Needless to say, the latter will also find much that is of interest.

There are some interesting early chapters devoted to an explanation of the need for air conditioning and of the many considerations involved in deciding on the degree and manner in which such conditioning can best be effected. After assimilating these points the reader is then given detailed descriptions of the many different methods available and of the actual appliances by the aid of which the desired results can be achieved. These include a diversity of apparatus for heating, cooling and humidifying or dehumidifying extending from the central plant, with details of transmission circuits for the fluid media employed, down to the apparatus required for use in, or in connection with, the space to be air conditioned.

Summing up, this book may confidently be said to be a very readable and informative one on a subject that is of considerable interest to many.

R. S D.

INQUIRY BUREAU

Work Done in Excess of Quantities

Q.—As sub-contractors, we recently completed for a local Corporation the painting work at a number of houses. Our quotation for the painting of these houses was given to the main contractors from a bill of quantities. On completion of the contract we found that the work and measurements were in excess of the quantities—*e.g.*, certain parts, which did not appear in the quantities, have been painted, amounting in monetary value to approximately £3 per house.

The main contractor in accepting our quotation wrote as follows:—

"We herewith accept your estimate for the painters' work at the above, for which we have your priced schedule. The conditions of contract are in accordance with the main contract, which states that the quantities do not form part of the contract, and the work is not re-measured. The prices will be used in any additions or deductions from the original scheme."

Please note that, whilst no additions are accepted on houses for extra work, it appears the local authorities or the main contractors can deduct from our bill of quantities 7s. 6d. for omissions from outhouses which are in the same contract.

The main contractor and the local authority state that we have no claim for this extra work and we should like your views on this matter.

SUB-CONTRACTOR.

A.—A legal correspondent writes: I think, from the information supplied, that the local authority's contention is right, and that no claim could be sustained for the extra work. The words "the prices will be used in any additions or deductions from the original scheme" apply, in my opinion, to "authorised additions," and furnish the means for pricing them. By "authorised additions" I mean, of course, those authorised by the architect or other official as the agent of the authority.

In regard to the deduction for "omissions," this would also appear to be correct. inasmuch as certain work covered by the priced quantities was not, in fact, carried out.

MASONRY APPRENTICES' EXAMINATION

THE London Association of Master Stone Masons has arranged for the annual practical examination for London masonry apprentices to be held on September 17, at the works of Messrs. Holloway Bros. (London) Ltd., 112, Thessaly-road, S.W.8, and it is expected that some 45-50 boys will be taking part.

The boys will be divided into four classes, according to the length of time they have been at the trade, and they will be judged not only on the results of a two-hour practical test but also on their school report. Prizes are to be awarded to those attaining the necessary standard of efficiency, and the prize distribution will take place at the offices of the London Master Builders' Association, 47, Bedford-square, W.C.1, on September 27.

Arrangements are being made to provide a tea after the Examination. It is also proposed that all boys taking part will make a trip to Oxford on September 20. Before the recent war these annual examinations and outings proved very effective in stimulating a keener interest in the craft and also a competitive spirit between boys from different firms.

BUILDING IN EUROPE

Timber a Limiting Factor

A BIRD'S-EYE view of building activity in Europe last year is given in a formidable document, just published at Geneva by the Department of Economic Affairs of the United Nations. According to this Europe's production and trade are now close to their pre-war levels; but the underlying problems of the European economics do not appear to be appreciably nearer solution. Building activity increased substantially in all the countries, of which records are available, during the year. The greatest progress was in the production of cement, which, outside Germany, was 10 per cent. above pre-war. France last year produced about 5½ million tons of cement as compared with 3½ millions in 1937. The production of cement in the United Kingdom and Belgium was about the same, but that of Spain four times pre-war.

Timber continued to be the most important factor in building. The production of softwoods in Europe was slightly over two-thirds of pre-war and the consumption of softwoods somewhat less than two-thirds. In addition, the available supplies are still badly distributed. Owing to the shortage of coal during the war some timber-producing countries have converted their resources to the production of fuel wood.

This survey of Europe in 1948 deals with the position in the United Kingdom in these words: "Timber-consuming countries like the United Kingdom have substituted other commodities, such as steel, for timber which, in turn, has aggravated the shortage of steel. While the consumption of producing countries reached or passed its pre-war level, the consumption of the largest importer, the United Kingdom, is only 40 per cent. of 1937, and this set the limit to house-building in the United Kingdom at about 200,000 dwellings as against 350,000 to 400,000 before the war."

NATIONAL INSURANCE

Exchange of Yellow "C" Cards

THE Ministry of National Insurance announces that over five million yellow "C" National Insurance cards finish on September 4. They should be exchanged for new cards at any local National Insurance office between September 5 and 10. Persons with orange, pink or grey National Insurance cards are not affected. The Ministry of National Insurance offers this advice to people with yellow cards.

Make sure the National Insurance number is noted before exchanging the card. It can then be quoted if benefit has to be claimed later. This will not only help to avoid delay in paying benefit, but will save manpower.

Local National Insurance offices have already borrowed yellow cards from some larger employers to prepare new cards in advance. These employers are asked to send in their yellow cards in the same order as the cards were returned to them by the local office. This will save re-sorting at the local office and help employers to get their new cards sorted in with those they already hold. Other employers should take or send the yellow "C" cards of their staff and their own cards, if yellow, all together to a local National Insurance office between September 5 and 10. New cards for the 52 weeks beginning September 5 will then be issued. Yellow cards should not be given to employees to exchange personally unless exchange in bulk is impossible.

Self-employed (Class 2) and non-employed (Class 3) persons with yellow cards should first stamp their cards up to date and then take or send them to a local National Insurance office between September 5 and 10.

BRITISH STANDARDS

Some Recent Publications

The British Standards Institution has recently issued the following publications:—

B.S. 1559, Reels and Wooden Drums for Bare Wires, for use in the United Kingdom (price 2s. post free).

B.S. 1133 (section 15), Tensional Steel Strapping (price 2s. each).

B.S. 1571, which contains complete information on acceptance tests for positive-displacement compressors and exhausters (price 2s. 6d., post free).

The British Standard for Ships' Cargo Lifting Blocks and Typical Derrick Rigs (B.S. 408: 1949) has also just recently been extensively revised and extended by the inclusion of new provisions and appendices. The blocks specified are for use with wire rope, and permissible working stresses on the components of the blocks are dealt with fully. Other clauses deal with materials, head fittings, sheaves and sheave diameters, strength of beckets, and proof load on beckets (price 5s. post free).

B.S. 1580:1949, Unified Screw Threads, (price 7s. 6d., post free), B.S. 1565: 1949, Galvanised Mild Steel Indirect Cylinders (Annular or Saddle-Back Type) (price 2s. 6d., post free); B.S. 1566: 1949, Copper Indirect Cylinders (Annular Type) (price 2s. 6d., post free); B.S. 1133: 1949, Packaging Code (price 5s., post free).

Copies of these Standards may be obtained from the British Standards Institution, Sales Department, 24, Victoria-street, London, S.W.1.

WATerloo 6314 (6 lines)

AYGEE

METAL WINDOWS

A product of England's Largest Glazing Contractors

100, Westminster Bridge Rd., LONDON, S.E.1

PRESTRESSED CONCRETE LECTURES

Course at Building Exhibition

A SERIES of lectures on prestressed concrete will be given in the National Hall Gallery Lecture Room, Olympia, during the Building Exhibition. They will commence at 6 p.m. daily. Applications for tickets for all or any one of the lectures should be made to the secretary, Prestressed Concrete Development Group, 52, Grosvenor-gardens, S.W.1, or, during the time the exhibition is open, to the stand of the Cement and Concrete Association (No. 250, Row O), National Hall, Olympia. Lectures will be given as follows:—

Thursday, November 17: "General principles of prestressed concrete," by P. G. Bowie, A.C.G.I., A.M.I.C.E., chief structural engineer, Cement and Concrete Association. *Friday, November* 18: "The Magnel system and its application," by D. H. May, O.B.E., A.M.I.C.E., director, Stressed Concrete Design, Ltd. *Saturday, November* 19: "High strength concrete for prestressed work," by A. R. Collins, M.B.E., Ph.D., technical director, Cement and Concrete Association. *Monday, November* 21: "The Freyssinet system and its applications," by A. J. Harris, B.Sc.(Eng.), A.M.I.C.E., Pre-Stressed Concrete Co., Ltd. *Tuesday, November* 22: "The architectural use of prestressed concrete," by L. W. Elliott, A.R.I.B.A., A.M.I.C.E. *Wednesday, November* 23: "The Preload system," by L. S. G. Homewood, general manager, Preload (Great Britain), Ltd. *Thursday, November* 24: "Ministry of Works' experimental work on prestressed concrete," by H. Kaylor, B.Sc., A.M.I.C.E. *Friday, November* 25: "Hoyer method of prestressed concrete," by D. H. New, B.Sc. (Eng.), A.M.I.C.E., Concrete Development Co., Ltd. *Saturday, November* 26: "The application of prestressing to shell roof construction," by H. G. Cousins, B.Sc., M.I.C.E., consulting engineer. *Monday, November* 28: "Prestressed concrete factory at Bristol" (and also technical information on exhibition structures in prestressed concrete), by C. W. Glover, M.I.Struct.E. *Tuesday, November* 29: "The Dow-Mac system of manufacture of prestressed concrete," by R. S. V. Barber, B.Sc., M.S.E. *Wednesday, November* 30: "Application of prestressing to some special structures," by P. G. Bowie, A.C.G.I., A.M.I.C.E.

THE NEW JURIES ACT

A reform which has been advocated for many years past will be implemented shortly, writes a correspondent. This is a provision that persons called to serve on juries, whether civil, criminal, or in coroners' courts, should be able to recover out-of-pocket expenses up to a reasonable amount.

The "fees" payable for many years have been: Common juror, 1s. in London, 8d. in the country, 2d. in the City of London Court. Now, under the Juries Act and beginning October 1, compensation for loss of earnings, travelling expenses and a subsistence allowance when the time occupied exceeds four hours are payable up to a sum of £1.

Also the Act provides for the person who, on being called to serve, finds on arrival that he is not actually wanted: he, too, will qualify for loss of earnings and expenses allowance. In each case a claim form will have to be made out and signed.

RATES OF WAGES IN THE BUILDING TRADE [AS FROM FEB. 7, 1949]

(Every endeavour is made to ensure accuracy, but we cannot be responsible for errors)

KEY TO SCHEDULE OF GRADE RATES.

Grade Classification,	A	A1	A2	A3
Craftsmen	2/10	2/9½	2/9	2/8½
Labourers	2/3¼	2/3	2/2½	2/2

Town.	Grade.
Aberavon	A
Aberdare	A
Abergavenny	A
Abingdon	A2
Accrington	A
Addlestone	A
Aldeburgh	A3
Aldershot District	A2
Alfreton U.D.	A
Alnwick	A1
Altrincham	A
Amble	A1
Amersham	A1
Ammanford	A
Andover	A2
Ardingly	A2
Arundel	A2
Ascot	A2
Ashby-de-la-Zouch U.D.	A
Ashby Woulds U.D.	A
Ashford (Kent)	A2
Ashford (Middlesex)	A
Ashington	A
Ashtead	A
Ashton-under-Lyne	A
Aspatria and Brayton	A2
Atherstone (parts of)	A1
Aylesbury	A2
Aylesby (Yorks)	A
Aylesham	A3
Bagshot	A2
Bakewell U.D.	A2
Banbury	A2
Barnard Castle U.D.	A1
Barnoldswick U.D.	A1
Barnsley	A
Barrow-in-Furness	A
Barrow-upon-Soar R.D. (exc. Thrussington A2)	A
Barry	A
Basford R.D. (exc. Willough-by-on-the-Wolds A2)	A
Basingstoke	A2
Bath	A
Batley	A
Baxterley	A1
Beaconsfield & District	A1
Beamish	A
Bearl	A
Bearpark	A
Beccles	A3
Bedale R.D.	A
Bedford	A
Bedlington	A
Bedwas	A
Beeston & Stapleford U.D.	A
Belper U.D.	A
Belton	A
Berkhamsted	A1
Berrington	A1
Berwick District	A1
Beverley	A
Bexhill-on-Sea	A2
Biggleswade	A2
Billericay	A1
Billing	A
Billingham U.D.	A
Bilsthorpe	A
Birchington	A2
Birkenhead	*
Birmingham C.B.	†A
Bishop Auckland	A
Bishop's Stortford	A1
Bispham	A
Blackburn	A
Blackpool	A
Blackwell R.D.	A
Blaydon U. D.	A
Blidworth	A
Blyth	A
Bognor Regis	A2
Boldon U.D.	A
Bolsover U.D.	A
Bolton	A
Bourne End	A1
Bournemouth District	A1
Bracknell	A2
Bradford	A
Bradford-on-Avon	A2
Braintree	A2
Breconshire, County of	‡A3
Brent Knoll	A2
Brentwood	A
Bridlington	A
Brierfield	A
Brighouse	A
Brighton	A1
Bristol	A
Broadstairs	A2
Bromsgrove U.D.	A
Brough	A
Broughton (Cheshire)	A
Buckley	A
Bungay	A3
Burnham-on-Crouch	A3
Burnley	A
Burton-on-Trent C.B.	A
Bury	A
Bury St. Edmunds	A3
Buxton	A1
Byfleet	A1
Calder Valley	A
Cambridge	A
Cannock U.D.	A
Canterbury	A2
Cardiff	A
Cardiganshire, County of	‡A3
Carlisle	A
Carmarthenshire, Cnty.of	‡A3
Carnarvonshire, Cnty of	‡A3
Carnforth	A
Castleford	A
Caterham	A
Chapel-en-le-Frith	A1
Charmy Down	A
Chatham & District	A1
Cheadle (Staffs) R.D.	A
Chelmsford	A
Cheltenham	A1
Chepstow	A1
Chertsey	A
Chester	A
Chesterfield M.B.	A
Chesterfield R.D.	A
Chester-le-Street U.D.	A
Chichester	A2
Chippenham (inc. Chippenham Within and Hardenhuish)	A2
Chorley	A
Clacton	A1
Cleethorpes	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville U.D.	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A1
Congleton	A1
Consett	A
Conway	A1
Cornwall, County of	‡A2
Coventry C.B.	A
Cranbrook	A2
Cranleigh	A2
Crawley (Sussex)	A2
Crewe	A
Cromer	A1
Crowborough	A2
Cuckfield	A2
Dalton-in-Furness	A
Darlington District	A
Darwen	A
Deal	A2
Denbigh Town	A2
Derby C.B.	A
Devizes	A2
Devon, County of	‡A2
Dewsbury	A
Didcot	A2
Diss	A3
Doncaster C.B.	A
Dorking	A1
Dorset, County of (excepting Poole and Wimborne A1)	A2
Dover	A2
Dovercourt	A1
Driffield U.D.	A1
Droitwich M.B.	A1
Dudley M.B.	A
Dunstable	A
Durham City	A
Eastbourne	A1
E. Glam. & Mon. Val.	A
East Grinstead District	A2
Eastwood (Notts.) U.D.	A
Ebbw Vale & District	A
Edenbridge	A2
Ely	A3
Epping	A
Exeter	A1
Fakenham	A3
Falmouth	A2
Fareham	A
Faversham	A2
Felixstowe	A1
Filey U.D.	A1
Fleetwood	A
Flint	A
Folkestone	A2
Frinton	A1
Frome	A1
Gainsborough R.D. (Mid. pt.)	A2
Gateshead	A
Gillingham (Kent)	A1
Glossop	A
Gloucester	A1
Gloucestershire, Cnty. of	‡A2
Godalming	A2
Goole M.B.	A
Gosport	A
Grantham M.B.	A1
Gravesend	A
Great Yarmouth	A1
Grimsby (Yorks.)	A
Grimsby R.D. (Lincs.)	A3
Guildford District	A2
Guilsborough	A1
Guiseley	A
Halesowen M.B.	A
Halifax	A
Halstead	A2
Haresfield	A1
Harlow	A1
Harpenden	A1
Harrogate	A
Hartlepool	A
Harwich	A1
Haslemere	A2
Hastings	A2
Hatfield (Herts.)	A
Haywards Heath	A2
Hemel Hempstead	A1
Henley-on-Thames	A2
Hereford	A2
Herefordshire, Cnty. of	‡A2
Herne Bay	A2
Hertford	A
Hexham U.D.	A
Heysham	A
High Wycombe	A1
Highworth	A2
Hinckley U.D.	A
Hitchin	A1
Hoddesdon	A
Horley	A2
Horsham	A2
Horwich	A
Huddersfield	A
Hull	A
Hunstanton	A2
Huntingdon (Staffs)	A
Ilkley	A
Ingatestone	A1
Ipswich	A
Isle of Sheppey	A2
Isle of Thanet	A2
Isle of Wight	A3
Jarrow M.B.	A
Keighley	A
Kendal	A
Kenilworth U.D.	A
Kettering M.B.	A
Keynsham	A
Kidderminster M.B.	A
King's Lynn	A2
Kingskerswell	A1
Kingsteignton	A1
Kirkham	A
Knaresborough U.D.	A
Knowle	A1
Lancaster	A
Leamington M.B.	A
Leatherhead	A
Leeds	A
Leicester C.B.	A
Leighton Buzzard	A2
Letchworth	A1
Lewes	A2
Lichfield M.B.	A1
Lincoln C.B.	A
Littlehampton	A2
Liverpool	*
Llandudno	A1
Llanelly	A
London	*
Long Eaton	A
Loughborough M.B.	A
Louth M.B.	A2
Lowestoft	A1
Loxton	A2
Luton	A
Lyneham (Devon)	A1
Macclesfield	A1
Maidenhead	A1
Maidstone	A1
Maltby	A
Maldon (Essex)	A2
Malvern U.D.	A2
Manchester	A
Manningtree	A1
Mansfield M.B.	A
March	A2
Margate	A2
Market Harborough	A1
Maryport	A
Matlock U.D.	A1
Melksham	A2
Melton Constable	A3
Melton Mowbray U.D.	A2
Merthyr	A
Middlesbrough	A
Middleton	A
Middlewich	A1
Milford Haven	A2
Morecambe	A
Morley	A
Mundesley	A2
Nantwich	A1
Nelson	A
Newark-on-Trent R.D.	A1
Newbury	A2
Newcastle-on-Tyne	A
Newcastle-under-Lyme	A
New Forest District	A2
Newmarket	A2
Newport, Mon.	A
Newport Pagnell	A2
Newton Abbot	A1
Northallerton Dist.	A
Northampton C.B.	A
North Shields	A
Norton Radstock	A1
Norwich	A
Nottingham C.B.	A
Nuneaton M.B.	A
Oakham U.D.	A2
Oldham	A
Ongar	A
Ormskirk	A
Ossett and Horbury	A
Oxford	A
Oxted	A1
Paignton	A1
Peterborough	A
,, Soke	A1
Pickering	A3
Plymouth	A
Pontefract	A
Pontypridd District	A
Portishead	A
Portland Stoneyards	A
Portsmouth	A
Port Talbot	A
Preston	A
Pudsey	A
Pulborough	A2
Radnorshire, County of	‡A3
Ramsgate	A2
Rayleigh	A1
Reading	A
Redcar B.	A
Redditch U.D.	A
Redhill and Reigate	A
Ripon	A3
Rochdale	A
Rochester	A1
Rotherham	A
Rugby M.B.	A
Saffron Walden	A2
St. Albans	A
St. Helens	A
St. Neots	A2
Salisbury City	A2
Salisbury Plain	A2
Sawbridgeworth	A1
Saxmundham	A3
Scarborough	A
Scunthorpe	A
Selby	A
Sevenoaks	A1
Sheerness	A2
Sheffield	A
Shipley	A
Shoeburyness	A
Shoreham	A1
Shrewsbury M.B.	A
Sittingbourne	A2
Skegness U.D.	A1
Skipton U.D.	A1
Sleaford U.D.	A2
Slough	A1
Smethwick C.B.	†A
Snettisham	A2
Somerset, County of	‡A2
Southampton	A
Southend-on-Sea Dist.	A
Southport	A
South Shields C.B.	A
Spalding U.D.	A2
Stafford M.B.	A
Staines	A
Stamford M.B.	A1
Stantonwick	A
Stevenage	A1
Stockport	A
Stockton R.D.	A
Stockton-on-Tees	A
Stoke-on-Trent C.B.	A
Stoke Orchard	A1
Stourbridge M.B.	A
Stourport U.D.	A
Stowmarket	A3
Stratford-on-Avon M.B.	A1
Sunderland District	A
Sunningdale	A
Sutton Coldfield M.B.	A
Swaffham	A3
Swanage	A2
Swansea	A
Swindon	A2
Swinton U.D.	A
Tamworth M.B.	A
Tenterden	A2
Tewkesbury	A1
Thames Haven	A
Thetford	A3
Thorpe Bay	A
Thurrock U.D.C. Area	A
,, North of, to Billericay	A1
Tilbury	A
Todmorden	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Trowbridge	A2
Tunbridge Wells	A1
Tynemouth C.B.	A
Uppingham (Salop)	A1
Uttoxeter U.D.	A2
Wakefield	A
Wallsend B.	A
Walsall C.B.	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A2
Warrington	A
Warwick M.B.	A
Wellington R.D.	A1
Wells (Norfolk)	A3
Welwyn	A
Welwyn Gar. City	A
West Bromwich C.B.	A
Westbury	A2
Westcliff-on-Sea	A
Westerham	A1
Weston-super-Mare	A1
Weybridge	A
Weymouth	A2
Whitby U.D.	A1
Whitstable and District	A2
Wickford	A1
Widnes	A
Wigan	A
Wigton	A3
Willington	A
Wilmslow	A
Wilts. County of	‡A2
Winchester	A2
Windermere	A3
Windsor and Eton	A1
Wisbech	A2
Witham	A2
Woking (District)	A1
Wokingham	A2
Wolverhampton C.B.	A
Woodbridge	A3
Worcester C.B.	A
Workington	A
Worksop M.B.	A
Worthing	A2
Wrexham (incl. Cefn)	A
Wroughton	A2
Wylam	A
Wymondham	A3
York	A

* For Birkenhead, Liverpool, and London the rates are :—Craftsmen, 2s. 11½d.; Labourers, 2s. 4½d. In the case of London the rate beyond the 12-mile radius is :—Craftsmen, 2s. 11d.; Labourers, 2s. 4d.

† Plus 2d. per working day.

‡ This is the County rate and applies except where higher grades are stated.

NOTE.—Carpenters, Joiners and Plumbers in all towns and districts receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is 2/- per hour. Women introduced to carry out work other than craft processes, 1s. 8d. per hour.

For Building Trade Wages in Scotland, see page 306.

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of softwoods are for cash on delivery.

BRICKS, etc.

	£ s. d.
First Hard Stocks	9 5 0
Second Hard Stocks	8 15 0
Mild Stocks	7 10 0

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.

2⅝-in. Nominal Phorpres Bricks.	At Maiden Lane Stn., per 1,000.	To Sites in West Central District per 1,000.
	s. d.	s. d.
Commons	73 0	85 0
Cellular	67 11	85 0
Keyed	75 0	87 0
Cellular Keyed ...	69 11	87 0
Rustics	93 0	105 0
Cellular Rustics ...	87 11	102 11
Single Bullnose ...	93 0	105 0
Sandfaced	103 0	115 0
Cortex Facing Brick ...	88 0	100 0

* At King's Cross Stn. † ex King's Cross Stn.

	£ s. d.
Best blue Pressed Staffs. (London Stns.) ...	18 16 0
Do. Bullnose (London Stns.)	20 2 0
Blue Wire Cuts (London Stns.)	16 14 6
Midhurst Lime Bricks. (Del. London Sites)	8 5 0
Uxbridge Whites (Del. London Sites) ...	6 4 6

Best Stourbridge Fire Brick (London Stns.):—

£ s. d.	£ s. d.
2½ in. ... 16 18 6	3 in. ... 19 16 0

GLAZED BRICKS (London Stns.). The prices given below are now subject to a percentage addition of 27½ for Best, and 22½ for Second quality,

Best White Ivory and Salt Glazed		D'ble Stretchers D'ble Headers	53 10 0 48 10 0
Stretcher	40 0 0	One side & two ends	54 10 0
Headers	39 10 0	Two sides & one end	56 0 0
Quoins, Bullnose & 4½in. Flats	50 0 0	Splays and Squints	52 0 0

Second Quality, £2 0s. per 1,000 less than best. Cream and buff, £2 0s. extra over white. Other colours. Hard Glaze, £5 10s. 0d. extra over white.

Haulage to site 20s. 1,000.

PARTITION SLABS.

Delivered Central London Area.

HOLLOW CLAY PARTITION BLOCKS.

London Brick Company.

Minimum Lorry Loads. Keyed.	s. d.
2" per yd. sup. 120 yds.	3 1
2½" " " 100 "	3 4
3" " " 100 "	4 0
4" " " 84 "	4 7

Half blocks *add* 2s. per yard super to above prices

CLINKER CONCRETE.

2" per yd. sup.	2 7	3" per yd. sup.	3 6
2½" " "	3 1	4" " "	4 6

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	3 1
Size 12 x 9 x 2½" " "	3 4
Size 12 x 9 x 3" " "	4 0
Size 12 x 9 x 4" " "	4 7

HEMPSTEAD—KEYED TWO SIDES.

12 x 9 x 2"	3 1	12 x 9 x 3"	4 0
12 x 9 x 2½"	3 4	12 x 9 x 4"	4 7

Per yard super d/d. Free on site, London.

Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE—	
Monks Park	5 4
St. Aldhelm Box Ground	6 4
Delivered in railway trucks at South Lambeth, G.W.R., per ft. cube.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly. ..... per ft. cube	6 1½
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire.	
Random blocks up to 3 ft. 3 in. long and not over 10 cu. ft. ..... per ft. cube	22 6
Slabs—Random sizes sawn 2 sides, up to 5 ft. long and not over 15 ft. super, ½ in. per ft. super	4 7
YORK STONE, BLUE—*Robin Hood Quality*.	
Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... per ft. super	9 4
6 in. rubbed two sides, ditto " "	10 10
3 in sawn two sides slabs (random sizes) ..... " "	4 5
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) " "	2 4
1½ in. to 2 in. ditto ..... " "	2 1½
HARD YORK—	
Delivered at any Goods Station, London	
Scrappled random blocks per ft. cube	13 4
6 in. sawn two sides landings to sizes (under 40 ft. super) ..... per ft. super	10 0
6 in. rubbed two sides, ditto " "	11 10
4 in. sawn two sides slabs (random sizes) ..... " "	6 5
3 in. ditto ditto ..... " "	4 10
2 in. self-faced random flags per yd. super...	19 9

CEMENT.

Best British Portland Cement. Standard Specification delivered London area	£ s. d.
6-ton loads and upwards site ..... per ton	3 0 6
1- to 6-tons site	3 3 6

In non-returnable paper bags charged at 11/- net per ton or 7d. each net per sack in lots of less than 1 ton.

In non-returnable jute sacks charged at 11 - per ton.

In returnable jute sacks charged at the rate of 35/6 net per ton of cement of 1/9½ net per sack in lots of less than 1 ton. Credit on return at 1/6 net per sack.

In returnable cotton sacks charged at the rate of 3/4 net each sack. Credit on return at 3/- net each sack.

"Ferrocrete" Rapid Hardening Cement 6-ton loads and upwards site	3 6 6
1- to 6-tons site	3 9 6

In paper bags 11/- per ton extra.

"Aquacrete" Water Repellent cement, 31/6 per ton on ordinary "Blue Circle" prices. In paper bags, 9/- per ton extra.	
Red, Buff or Khaki "Colorcrete" in 6-ton lots	5 2 0

In paper bags 9/- per ton extra.

Other colours, according to colour. In 4-ton lots from 173/- to 397/- per ton (including paper bags).	
"Snowcrete" White Portland Cement (In free paper bags)	11 14 0
Under one ton ..... per cwt.	0 14 0
"417" Cement (Ultra Rapid Hardening) Delivered Site London Area in 6-ton lots and upwards	4 2 0

In paper bags 9/- per ton extra.

Super Cement (Waterproof), bags extra...	4 12 0
Cullamix Tyrolean Finish...£7 15 6 to (1-ton lots and upwards, including cost of paper bags).	9 9 0

£ s. d.	£ s. d.
Parian Cement 8 6 9	Keen's Cement, White 8 6 9
	Pink 8 1 9

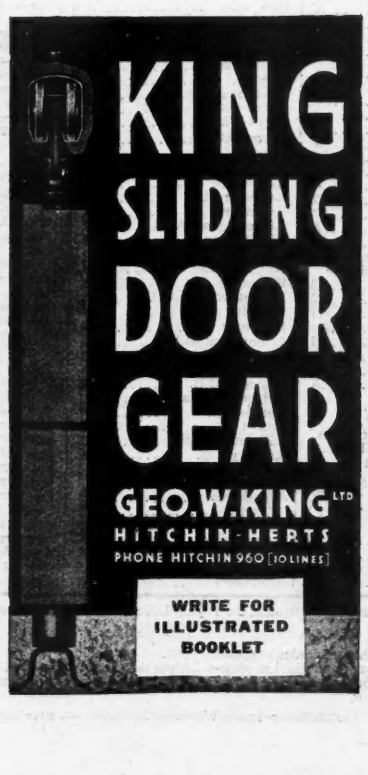
PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	5 11 9	Sirapite, Coarse	5 15 6
" White	5 19 9	" Finish	6 3 6

Above prices for 1-ton loads and over London Area.

Blue Lias Lime, inc. bags, 6-ton lots	5 17 6	Hydrated Lime, 6-ton lots	4 1 6
Granite Chips, 6-ton lots ...	2 3 0	Lump Lime, 6-ton lots	3 15 3
		Hair, per cwt....	4 4 6

Stourbridge Fireclay in paper bags £4 2s. 0d., 6-ton lots at railway depot.



PLASTER AND WALL BOARDS.

Plaster (Gypsum) Boards ⅜ in. thick, 600 yds. and over in one delivery 1/9 sq. yard.

Wall Boards—3 and 4' wide, 6 to 12', ⅜" thick. 600 yds. and over in one delivery, 2/- sq.yd.

Carriage paid to site.

SAND.

D/D site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

	per yd.	s. d.
Thames Ballast		15 9
Pit Ballast	"	15 10
Pit Sand	"	15 2
Washed Sand	"	17 0
¼ in. shingle	"	15 2
¼ in. Broken Brick	"	17 6
Pan Breeze	"	10 4

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons ..... Per 1,000 f.o.r London

	£ s. d.
Best machine made tiles from Broseley or Staffordshire districts	9 14 6
Ditto, hand-made, ditto	11 11 0
Ornamental ditto	12 4 0
Hip and valley tiles—Hand-made	19 5
(per dozen) —Machine-made	18 4

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES.

First quality slates from Penrhyn or Portamadoc carriage paid in full truck loads to London Rate Station

Per 1,000 actual	£ s. d.		£ s. d.
24 by 12	69 18 0	18 by 10	35 10 6
22 by 12	61 4 4	18 by 9	32 5 6
22 by 11	55 0 6	16 by 10	31 13 3
20 by 12	50 7 0	16 by 8	24 13 9
20 by 10	46 6 3		

NOTE : Breakage in transit, purchasers' responsibility.

PLUMBERS' BRASS WORK.

Delivered in London.

M.O.H.

S.D. BIB COCKS CRUTCH HEAD, FOR 1 TON.

½ in. 66/- ¾ in. 108/- per doz.

TOILET BIB COCKS FOR IRON.

½ in. 114/- ¾ in. 171/- per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
72/-	111/-	189/-	312/-	468/-	840/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
102/-	150/-	312/-	408/-	642/-	1056/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
17/-	20/-	36/-	68/-	108/-	140/- per doz.

HEAVY CROYDON BALL VALVES.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
97/-	150/-	263/-	394/-	570/- per doz.

CAPS AND SCREWS.

1½ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
23/6	33/-	41/-	79/-	107/-	139/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
29/-	36/-	67/-	77/-	101/- per doz.

LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½ x 6 lb.	1½ x 6 lb.	2 x 7 lb.	3 x 7 lb.
Lead P.	71/-	89/-	143/-	219/- per doz.
Lead S.	87/-	108/-	176/-	291/- per doz.

SOLDER.—Plumbers' 3/4, Tinmen's 4/2, Blow pipe 4/3 per lb.

Copper Tubes .....1/9½ per lb. Basis.
Brass Tubes .....1/7½ per lb. Basis.
Basis prices are subject to extras.

GLUE.

Best Scotch Glue	per ½ cwt.	4 9 9
Croid Glue	per lb.	9

VARNISHES, etc.

		Per gallon.
Oak Varnish	Outside	1 6 0
Fine do.	"	1 16 0
Fine Copal	"	1 15 0
Pale Copal	"	1 12 8
Floor Varnish	Inside	1 10 0
Fine Pale Paper	"	2 1 0
Hard Drying Oak	"	1 10 0
Fine Hard Drying Oak	"	1 12 0
Fine Copal Varnish	"	1 13 6
Best do.	"	1 16 0
Best Japan Gold Size	"	1 15 0
Best Black Japan	"	1 8 6
Brunswick Black		1 4 6
Berlin Black		1 8 6
Knotting (patent)		1 12 6
French and Brush Polish		1 8 6
Liquid Dryers in Terebene		1 8 6

* The information given on these pages has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

HOPE'S

Hot-dip Galvanized

STANDARD WINDOWS

are now fitted with a new pattern

FRICTION HINGE

which holds the casement firmly open in any desired position. No stay is necessary: cill is clear. Ample space is provided for cleaning outside of glass from inside. Nothing to wear out or go wrong

NOW AVAILABLE FROM STOCK

Send for List No. 251

HENRY HOPE & SONS LTD., SMETHWICK, BIRMINGHAM
and 17 BERNERS ST., LONDON, W.1

For Timber, Plywood, Wallboards, Doors, Structural Insulation, Roof Sheeting

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EAST MOORS · CARDIFF

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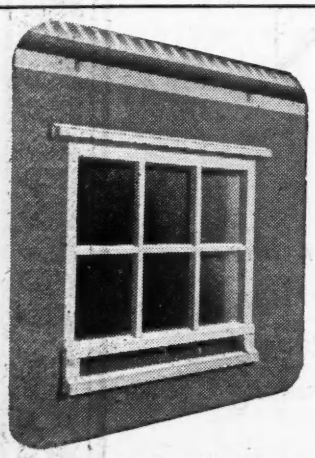
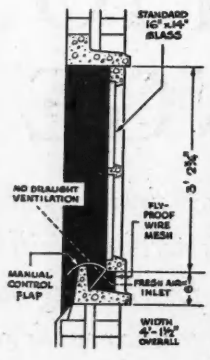




THE **KING** PRECAST CONCRETE **WINDOW**

(PATENTED)

The KING Precast Concrete Window is particularly suitable for Agricultural and Industrial Buildings requiring flyproof, no draught, controlled ventilation. Note these features:

- LOW COST
- NO MAINTENANCE
- NO LINTOL REQUIRED FOR SINGLE STOREY BUILDINGS
- IDEAL AS AN ARCHITECTURAL FEATURE, PARTICULARLY WITH STONE WALLING
- NO PAINTING
- NO HINGES TO RUST
- CAN BE SUPPLIED WITH OR WITHOUT PATENT VENTILATING CILL
- ONLY ONE STANDARD SIZE OF GLASS
- SPECIAL LINTOL ILLUSTRATED CAN BE PROVIDED IF REQUIRED

PROMPT DELIVERY

WRITE OR TELEPHONE FOR FURTHER PARTICULARS TO:

GEO. W. KING LTD., B.D.G. WORKS, HITCHIN, HERTS.

TELEPHONE: HITCHIN 960 (10 LINES)

JOHN KENT

for *Linsitu* FLOORING

Now being used for flats and L.C.C. Housing Schemes. Bitumen-based waterproof floor covering ideal for homes, offices, factories, hospitals, etc. Non-absorbent, non-slip and hard wearing. Impervious to heat. Looks like lino, takes similar polish. Can be laid on existing concrete or wood floors. Made in a variety of colours.

for ★ LUXOR ★

MAGNESITE, JOINTLESS FLOORING

A plastic flooring with new features of comfort, elegance and durability; Luxor has been developed as a result of many years of research into the chemical reactions of oxychloride cements and extensive practical experience of the technicalities of floor laying.

for PLASTERING PAINTING AND DECORATING

In this department our expert staff of highly skilled craftsmen and operatives is able to carry out first-class work of every type. A John Kent job is a job well done, and good work is always economical in the long run. Your enquiries are invited.

★ *ADDRESS YOUR ENQUIRIES TO*

John Kent (LONDON) *Ltd*

25 BALLARDS LANE, N.3

TELEPHONE: FINCHLEY 5927

PRICES CURRENT OF MATERIALS—(contd.)

See Note at top of preceding page.

PAINTS, etc.

		£ s. d.
Raw Linseed Oil (5 galls.)	per gallon	16 9
Boiled Linseed Oil (5 galls.) ...	"	17 3
Genuine White Lead (free kegs)	cwt.	6 15 6
Genuine White Lead Paint (tins free)	gall.	2 3 6
Genuine Red Lead	cwt.	6 9 3
Putty (free packages)	cwt.	2 10 0
Size XD quality.....	f'kn.	8 0

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION.	PER TON
R. S. Joists, cut and fitted	£34 0 0
Plain Compound Girders	£38 10 0
Stanchions	£46 0 0
In Roof Work	£58 10 0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
⅜ in.	30 1 0	½ in.	27 16 0
⅝ in.	29 6 0	¾ in. to 2¾ in.	27 1 0
⅞ in.	28 11 0		

W. I. TUBES.

TUBES AND TUBULARS.

Galv. Class	A.	List price, less 12½ per cent.	
" "	B.	" 7½ "	
" "	C.	" Net.	
Black, "	A	" less 33 per cent.	
" "	B	" " 22½ "	
" "	C	" " 15 "	

C.I. HALF-ROUND GUTTERS.—London Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Prices ex Stop ends.
3 in.	2/5	2/2	7d.
3½ in.	2/9	2/5	7d.
4 in.	2/10	2/7	1/–
4½ in.	3/2	3/–	1/2
5 in.	3/5	3/3	1/3

O.G. GUTTERS.

3 in.	3/2	2/10	9d.
3½ in.	3/7	2/10	1/–
4 in.	3/7	3/–	1/2
4½ in.	3/9	3/5	1/3
5 in.	4/7	4/–	1/5

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Angles.	Branches.
2 in.	5/–	2/7	3/10
2½ in.	5/4	3/–	4/6
3 in.	5/11	3/8	5/6
3½ in.	6/9	4/5	6/5
4 in.	7/9	5/3	7/8

NET PRICES.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES.—London Prices, ex stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	6/0	4/7	5/6
2½ in.	6/4	5/2	6/10
3 in.	7/1	5/7	8/3
3½ in.	7/11	6/10	9/6
4 in.	9/1	7/9	11/1

L.C.C. COATED DRAIN PIPE.

cwt. qr. lb. per yard. in 9 fts.	Bends.	Branches.
4 in. ... 1 1 17	16/6	11/6 20/2
6 in. ... 2 0 1	24/7	23/10 41/4

	Per ton basis in London. £ s. d.
IRON.—Staffordshire Crown, Merchant quality.....	29 5 0
IRON—Staffordshire Marked Bars	38 0 0
Mild Steel Bars	25 13 6
Mild Steel Hoops.....	27 10 0

	Ex Merchant's Stock per ton (two-ton) lots. £ s. d.
Soft Steel Sheets C.R. and C.A.—	
20 gauge	32 5 0
24 gauge	33 10 0
26 gauge	34 10 0
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—	
20 gauge	41 17 0
24 gauge	43 17 0
26 gauge	46 12 0
Galvanised Flat Sheets, C.R. and C.A.—	
20 gauge	42 19 6
24 gauge	44 19 6
26 gauge	47 14 6
	Per ton. £ s. d.
Cut Nails, 3 in. and up, 1 ton lots	41 15 0

ALL NET.

METAL WINDOWS. — Standard sizes suitable for complete houses, included all fittings, painting two coats, and delivery to job, average about 6s. 0d. to 6s. 3d. per foot super.

LEAD, etc.

(Deliveries in London, 5 cwts.)	Per ton. £ s. d.
LEAD.—Sheet, English, 3½ lb. and up	103 15 0
Pipe in coils	105 0 0
Soil pipe	108 0 0
Compo pipe	111 10 0

NOTE.—Country delivery, 10s. per ton extra, lots under 3 cwt., 4s. per cwt. extra and over 3 cwt. and under 5 cwt., 3s. per cwt. extra. Extra if cut to size. Old lead, ex London area, per ton, £65 0s. 0d. Buyers pay carriage.

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY. CUT SIZES.

	Per ft. Super. d.
18 ozs.....	4½
24 oz. clear.....	5½
26 oz.	7½
32 oz.	9½

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.	Per ft.
Rolled plate, ¼ in.	7½
Rough cast, 3/16 in.....	8½
Rough case, ¼ in.	8½
Figure rolled, and Cathedral white	7½
Figure rolled, and Cathedral tinted	10½
Rolled sheet	6
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	9½
Rolled plate is the same price as rough cast double rolled.	

	Per ft. d.
Wire Cast, ¼ in. thick	9½
Georgian Wired Cast	10

HOLLOW GLASS BLOCKS.

		s. d.	
P.B.	2—5½ in. × 5½ in. × 3⅛ in.	2 6	each net.
P.B.	3—7½ in. × 7½ in. × 3⅛ in.	3 10	"
P.B.	32—7½ in. × 7½ in. × 3⅛ in.	3 10	"
Radiused Corner Brick to match up with—			
P.B.	2	4 6	"
P.B.	3	6 0	"
P.B.	32	6 0	"

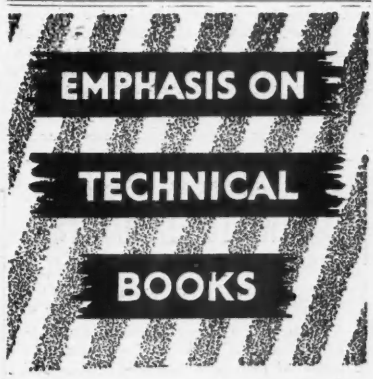
TIMBER, SOFTWOODS AND HARDWOODS.

HOME GROWN TIMBER PRICES.—*See Statutory Rules and Orders*, 1947. No. 94, price 5d. net.

IMPORTED SOFTWOODS PRICES.—*See Statutory Rules and Orders*, 1947, No. 731, price 1s. 1d. net.

IMPORTED HARDWOODS PRICES.—*See Statutory Rules and Orders*, 1947, No. 1524, price 1s. 1d. net.

Note.—The above can be obtained from H.M. Stationery Office, York House, Kingsway, W.C.2.



W. H. SMITH & SON give special attention to the requirements of technical men and students.

Books not in stock, but obtainable from publishers, are supplied within a few days. Students' needs for examinations are given priority.

NEWS IN BRIEF

Hot Tinning.

Complete working instructions for the production of hot-tinned coatings on prefabricated articles and components are included in a booklet by Mr. W. E. Hoare, B.Sc. (Eng.), called "Hot-Tinning" and published by the Tin Research Institute, Fraser-road, Greenford, Middlesex.

London Water Supplies.

Metropolitan Water Board plans to lay a new water main from the Thames above Teddington to Lea Valley reservoirs at Chingford, which supply eastern London, will involve a departure from normal waterworks practice. The main will be laid in a deep tunnel, the construction of which will be a major engineering undertaking.

Authority to proceed with the scheme, which will cost between £3,500,000 and £4m., is now being sought from the Ministry of Health. It will be necessary to construct a new intake and, probably, new pumping plant. The main will be about 22½ miles long.

It is expected that the Board will make a decision soon on the proposal to provide additional water storage in the Enborne Valley.

Decision Against Direct Labour.

Halifax town council are not to build any more houses by direct labour for the time being.

Opposing a recommendation of the housing committee to discontinue the use of direct labour, Alderman F. A. Leach said that there had been a saving of £60 on each of 20 houses built by this method in the last two years. Alderman Arthur Pickles, chairman of the housing committee, said that as an experiment building by direct labour had proved to be unsatisfactory due to the absence of labour, and the position was getting worse. One of the chief difficulties they had to overcome was finding what to do with the labourers during bad weather, and it had been possible during the last two years to put them on productive labour. This was one of the reasons why a saving had been shown; but in future it would not be possible to put men on productive labour of the same kind.

Tenders for 1,000 Houses Invited.

Tenders are invited by the Director-General, Department of Works and Housing, 271, Collins-street, Melbourne, C.1, Victoria, Australia, for (a) Supply and shipment to Australia, on wharf at Fremantle, Adelaide, Melbourne and Sydney (number for each port in accordance with specification), complete with all materials, components, fittings and equipment necessary for the erection and completion of 1,000 single-storey pre-cut or prefabricated houses; (b) Supply on board ship at port of shipment, complete with all the materials, components, fittings and equipment necessary for the erection and completion of 1,000 single-storey pre-cut or prefabricated houses; (c) Erection and completion of houses within a stated radius of the cities of Australia to which delivery is indicated in the specification should a tenderer desire to do so.

In respect of (a) and (c) tenders should be submitted by 4 p.m., Friday, October 7, and in respect of (c) by 4 p.m., Friday, October 21. Plans and specifications and tender forms are available, on application, from Mr. L. J. Morris, Office of the High Commissioner for Australia, Australia House, The Strand, London.

TRADE NEWS

Change of Address.

The Boddy Roofing Co., Ltd., have changed their address to 81, Essex-road, London, N.1. Tel: Canonbury 4281.

Winter Lectures on Copper Fittings.

Messrs. C. Ryan and Co., 2-20, Pancras-street, London, W.C.1, announce for the benefit of secretaries of trade associations, discussion groups etc., preparing their programmes for the winter session, that their Lecture Section is ready to provide, where possible, a lecturer on "Copper Tubes and Fittings." The section operates chiefly in the South of England, and a small nominal charge is made for expenses.

A 50th Anniversary.

To mark the 50th anniversary of the incorporation as a limited company of Messrs. Sturtevant Engineering Co., Ltd., of Cannon-street, E.C.4, the firm have issued a special illustrated catalogue in which a wide range of their newer products are described.

The contents are attractively set out under separate headings, such as "Air Conditioning," "Heating and Ventilation," "Dryers and Drying Systems" and so on. An introductory section contains details of the company's history, which began in the 1870's when Mr. B. F. Sturtevant, of Boston, U.S.A., foresaw "the enormous field open to anyone who could 'put air to work' efficiently."

Company's £8 Million Scheme.

Dorman Long and Co., Ltd., announce that the second stage of their major development plan is to be put in hand immediately, involving a further capital expenditure of over £8,000,000. This second stage includes the building of the projected open-hearth steel plant at Lackenby, with a capacity of 10,000 tons of ingots per week, extension of the new ore-grading plant at the Cleveland Works, and the installation of new blast-furnace ancillary equipment. It is anticipated that all this work can be completed by September, 1952. The first stage of the company's comprehensive development programme was the installation of central ore-unloading equipment and ore-preparation plant at the Cleveland Works, together with a private railway line over 3 miles in length across the Lackenby site and linking the Cleveland and Redcar Works. These two projects, costing nearly 2¼ million pounds, are now in successful operation.

A New Adhesive Wood-Pulp.

Messrs. Porosan Ltd., announce that they are producing "Synwood," best described as a highly adhesive processed wood-pulp which hardens on being exposed to the air and which, once set, has all the properties of actual wood. It may be sawn, drilled, worked with edge tools, sandpapered, stained, painted or polished. It is stated that tests have proved that "Synwood" is unshrinkable, non-inflammable and non-toxic. Although it may be reconstituted by the addition of a few drops of water (should it become rather too dry through constantly opening the container) it is quite impervious to water once it has really set, and may therefore be used for outside jobs, provided that it is protected from the weather while drying. In form, "Synwood" is a paste, supplied in jars and tins, and may be applied with the usual tools to wood, metal, stone, plaster, plastic, fibreboard, asbestos or other building materials.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from February, 1 1949. Every effort is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification A Craftsmen.... 2/10 Labourers.... 2/3½

Aberdeen .....A	Dumfriesshire ....A	Inverness .....A	Perthshire .....A
Ayrshire .....A	Dundee .....A	Inverurie .....A	Peterhead .....A
Banff .....A	Dunoon .....A	Kincardineshire ..A	Renfrewshire .....A
Berwickshire .....A	East Fife .....A	Kinross-shire .....A	Rothesay .....A
Bridge of Allan....A	East Lothian .....A	Lanarkshire .....A	Roxburgshire ....A
Broughty Ferry....A	Edinburgh .....A	Midlothian .....A	St. Andrews .....A
Clackmannanshire A	Fifeshire .....A	Monifieth .....A	Selkirkshire .....A
Doune.....A	Forfarshire .....A	Moray and Nairn ..A	Stewartry .....A
Dunblane .....A	Glasgow .....A	Newport .....A	Stirlingshire .....A
Dunbartonshire....A	Greenock .....A	Peeblesshire .....A	Stornoway .....A
Dumfries .....A	Hamilton .....A	Perth .....A	Tayport .....A
			West Lothian .....A

The Scottish N.J.C. award on which this is based provides for variation to current rates of Apprentices and Trainees' wages, which will be increased according to scale.

The Information given in this table is copyright.

Painters' rates : 2/10 Grade A ; 2/9 Grade B. (Grade B towns are Banff and Moray and Nairn.)

The Scottish Builder

Architectural Students' Mansion.

HILL OF TARVIT HOUSE and policies, near Cupar, Fifeshire, which were bequeathed to the National Trust for Scotland by the late Miss Elizabeth C. Sharp, have now been officially opened to the public. The mansion is to be used, as has already been announced in *The Builder*, as an architectural students' "college" where students will go for short courses of study.

Opening the house, LORD ELGIN asked what better centre could have been acquired for the housing of architectural students under the care of Professor Gordon Brown? It was situated in the midst of gems of architecture in Fife.

PROFESSOR GORDON BROWN, of the Chair of Architecture, Edinburgh University, speaking at the opening ceremony, said that many architects living in the city did not have the opportunity to study landscapes and suchlike that they would have if they lived in the country. It had been decided that for short periods during the year they should do their studying in the country, and Hill of Tarvit had been chosen for such activities. It afforded not only an historic building and furnishings, but a natural beauty which would be of value to the young student.

Building Exhibits.

The Scottish Industries Exhibition, which opened on September 1 at Kelvin Hall, Glasgow, includes an exhibit of various kinds of prefabricated houses being manufactured by The Blackburn Co., while the planning of Glasgow's airport at Renfrew is featured in the exhibit of the three British airlines, B.O.A.C., B.E.A. and B.S.A.A.

Granite Houses for Aberdeen.

The Department of Health for Scotland has granted the Aberdeen Corporation permission to build an additional 36 houses this year. The houses will be erected on the Kincorth Estate, and will be of granite instead of bricks, to help the trade. Amenities on the site will take the form of cleansing facilities for the workers, hot meals on the site in winter, and electric light for the carrying out of work after dark.

NEW BUILDINGS

Carnwath.—Plans in hand for new dormitory for Lanarkshire C.C. at Kerswell, these being in the hands of J. V. Paterson, 191, Ingram-st., Glasgow.

Douglas.—Plans to be prepared for new public school, for which the architect is William Watt, Albert-rd., Motherwell-Wishaw.

Glasgow.—Corporation Transport Architects, Transport House, Glasgow, have plans in hand for additions and other works at the tramway depot at Hawthorn-st.

Glasgow.—Plans in hand for houses for the Corporation to be erected at Balmulloch, for which the architect is A. J. Jury, Housing Offices, Glasgow Cross, The Trongate, Glasgow.

Lanarkshire.—Plans in hand for new premises for Bitupave, Ltd., at The Riverside-rd., Cambuslang, for which the architects are Watson, Hamilton & Wilson, 9, Calder-st., Motherwell-Wishaw.

Motherwell-Wishaw.—Plans in hand for new canteen, for which the architect is A. G. Stewart, Town Hall-bldgs.

Hammersmith School of Building.

The prospectus and time table (1949-50 session) for the Hammersmith School of Building and Arts and Crafts has been issued by the L.C.C. It contains full information on day school and evening class subjects in both the building and the arts and crafts departments as well as details of the scheme for national certificates in building. Photographs show sections of an exhibition of the School's work which was held in Hammersmith Town Hall and groups of students at work. General regulations, notices, details of fees and other miscellaneous items are also included.

10th EDITION REVISED

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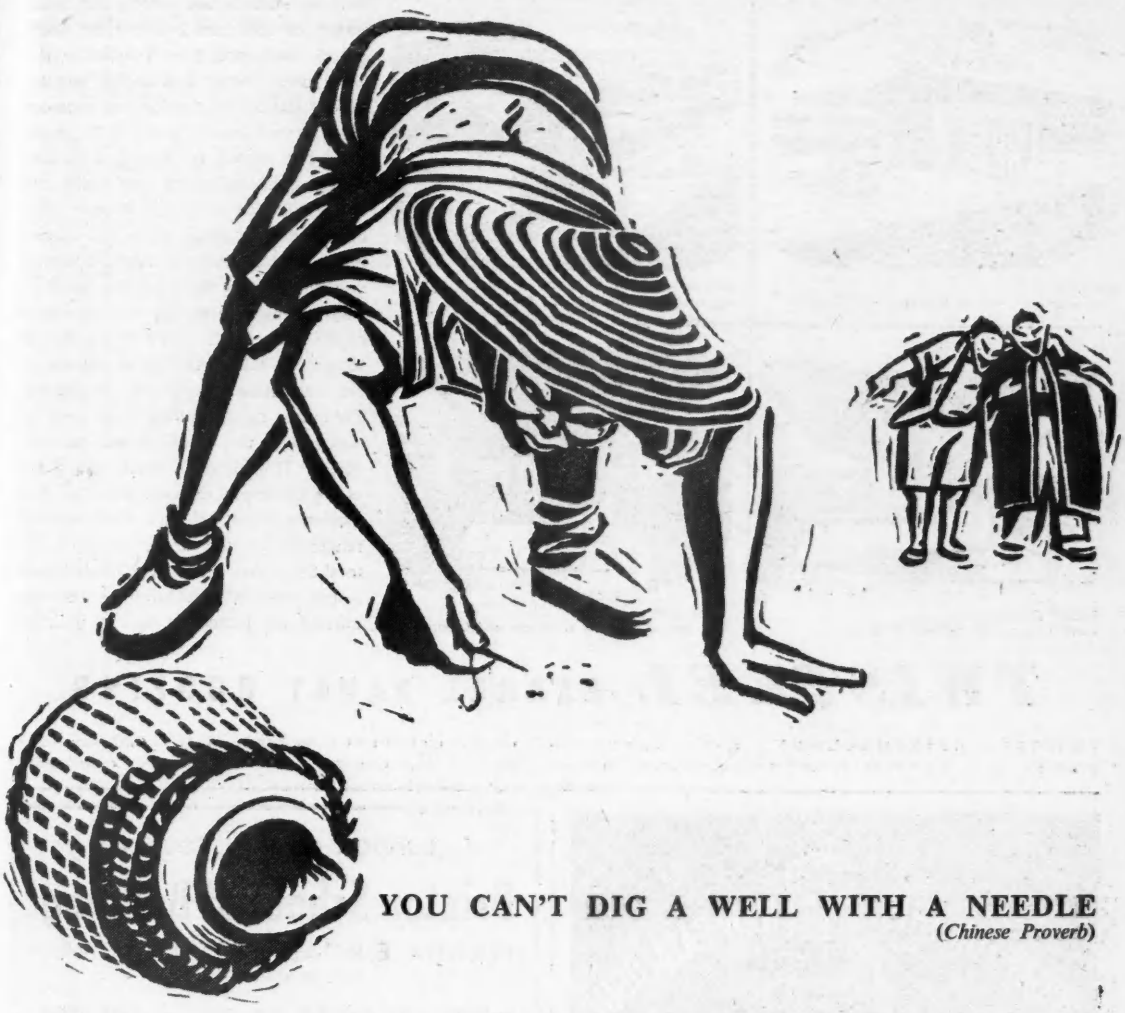

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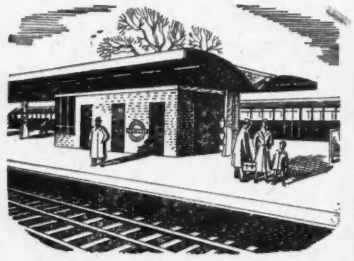

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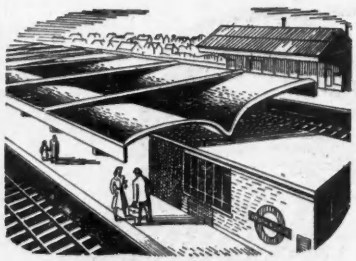

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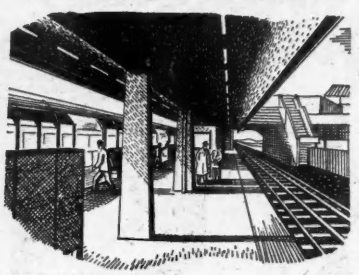

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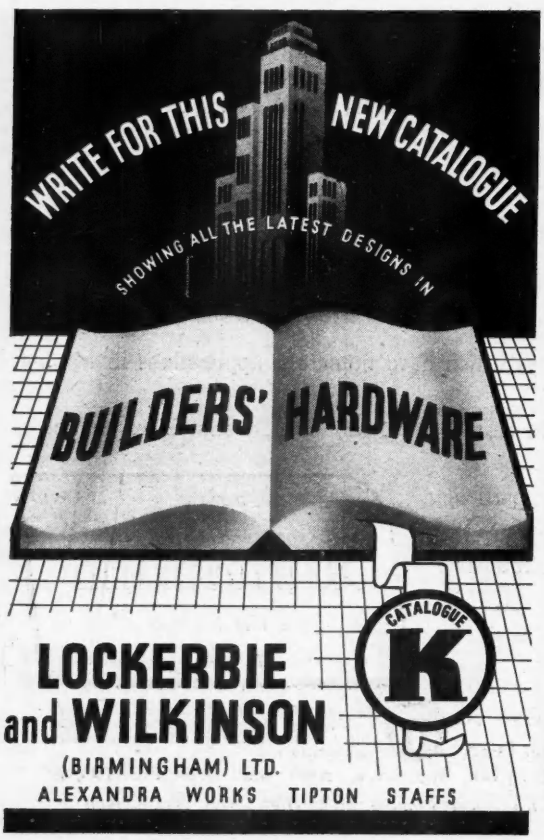

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DRY-ROT

Exhibition at the Building Centre

DRY-ROT in a building means expense, inconvenience and waste of a valuable material. Building timber is likely to be scarce in Britain for many years to come, and its premature decay should never be allowed to occur. To help with this problem an exhibition sponsored by the D.S.I.R. is opening on Monday, September 12, 1949, at the Building Centre in Conduit-street, W.1.

By means of photographs and specimens of timber attacked, the exhibition will show what dry-rot looks like, and will point out the likely places to find it. Once dry-rot is discovered, the cure is drastic. Measures which must be taken and methods of applying preservatives to the wood are therefore explained in detail. A further exhibit illustrates the ways in which dry-rot can be prevented in new buildings by effective damp-proof courses, thorough ventilation, and the use of properly seasoned timber. Among the other sections is one showing the distinction between dry-rot and insect damage. This point is important because the treatments required are quite different. The exhibits and information in the exhibition, which will be open for two months, have been provided by the Forest Products Research Laboratory, D.S.I.R. A free leaflet on dry-rot can be obtained from the Information Bureau of the Building Centre.

COLONIAL DEVELOPMENT

Building Plans for Ceylon

SPEAKING at the opening ceremony of the third session of the Ceylon Parliament, the Governor-General, LORD SOULBURY, referred to the housing policy in Ceylon, which, he said, would be pursued with greater vigour. The shortage of houses continued, especially in the areas of local authorities, but the situation was to be eased by the making of grants for their housing schemes. Funds would also be made available under the Housing Loans Act which was passed in the last session of the Ceylon Parliament.

In the field of industry, Lord Soulbury continued, the question of overall planning had been considered and an extra effort was to be made to co-ordinate and correlate both the established and the prospective schemes of development. Preliminary steps for the establishment of many new industries had, he said, already been taken and they would be proceeded with during the ensuing session. By a combination of Government and private enterprise it was anticipated that a substantial step forward would be taken in the industrialisation of the country.

The Governor-General also said that there were proposals for the reorganisation of the transport system and that plans had been prepared for major improvements to the Port of Colombo.

German War-Time Industry Reports.

Further reports on German War-Time Industry, published on August 20, included B.I.O.S. 1820, "Heating, Ventilating and District Heating in Germany," price 30s. (30s. 6d. post free). The reports may be seen at the principal public libraries, chambers of commerce, universities and professional and scientific Institutions and Board of Trade regional offices. Copies may also be purchased at the Sales Offices of H.M. Stationery Office or ordered by post from H.M.S.O., P.O. Box 569, London, S.E.1.

FUTURE CONSTRUCTION

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

SEPTEMBER 5.

†***Beds C.C.**—Cottage at Caddington Hall, Markyate. County A., Shire Hall.

***Harrow U.D.C.**—180 dwellings at Grove estate, Pinner. E. & S. Dep. £2 2s. Tenders by October 10.

SEPTEMBER 6.

***Northallerton U.D.C.**—Eight pairs of houses at The Crescent, Valley-rd. estate. P. Hartley, C. Dep. £2 2s.

SEPTEMBER 8.

†***Surrey C.C.**—Additional classrooms, etc., at Bellfields Primary School, Guildford. County A., County Hall, Kingston-on-Thames. Dep. £2 2s.

SEPTEMBER 10.

†***Essex C.C.**—Health centres at 3 sites. H. Conolly (F.), County A., County Hall, Chelmsford.

†***Newcastle-on-Tyne Regional Hospital Board.**—Conversion of two-ward blocks to form children's unit at Dryburn Hospital, Durham. Regional Architect, "Dunira," Osborne-rd., Newcastle-on-Tyne, 2.

†**Oundle and Thrapston R.D.C.**—18 houses at Easton-on-the-Hill. C., Council Offices, Midland-rd., Thrapston, Kettering. Dep. £1 1s.

SEPTEMBER 12.

†***Bucks C.C.**—Fire station at New-rd., Princes Risborough. County A., County Offices, Aylesbury. Dep. £5 5s. Tenders by October 11.

†***Bucks C.C.**—Additional classrooms and assembly hall at Chalfont St. Peter Secondary Modern School. County A., County Offices, Aylesbury. Dep. £3 3s. Tenders by October 5.

Dewsbury T.C.—Eight houses at Broomer-st. Boro' A. & Building S. Dep. £1.

***Durham C.C.**—Additions and alterations to cleansing centre to form child welfare centre and school clinic at Billingham. County A., Court-la.

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Falmouth T.C.—Four pairs of houses at Killigrew-rd. B.S., Municipal Offices. Dep. £3 3s.

†***West Suffolk C.C.**—Conversion of Exning House, Newmarket, into home for aged. County A., 13, Westgate-st., Bury St. Edmunds. Dep. £2 2s. Tenders by October 10.

SEPTEMBER 13.

Devizes R.D.C.—26 houses and site works at 3 sites. Edwards & Webster, Architects, 22, Market-pl., Chippenham, and 1, St. John's-st., Devizes. Dep. £1 1s. each scheme.

†***Northamptonshire C.C.**—Central kitchen at Wooton. County A., Northampton.

Nottingham T.C.—(a) New primary school at Elm-ave., and (b) new primary school at Oxclose-la. City E. & S., Guildhall. Dep. £2 each.

SEPTEMBER 14.

Chorley T.C.—56 houses and 2 bungalows at Tootell-st. B.E., Town Hall. Dep. £2 2s.

†***Staffordshire E.C.**—County primary junior and infants' school, Newcastle-under-Lyme. B.E. & S., Lancaster-bldgs., High-st., Newcastle-under-Lyme. Dep. £3 3s. Tenders by September 26.

†***Wandsworth B.C.**—60 flats at Southfields and Streatham. R. H. Jerman, T.C.

SEPTEMBER 15.

†**Devon C.C.**—County primary school at Watcombe, Torquay. County A., 97, Heavitree-rd., Exeter. Dep. £3 3s.

Woking U.D.C.—19 houses at St. Mary's estate, Byfleet, Contract No. 5. E. & S., Council Offices. Dep. £2 2s.

SEPTEMBER 16.

†***Derby C.B.**—New junior school at The Mount site, Grange-ave., Normanton. T. W. East (F.), Boro' A., Council House. Dep. £2 2s. Tenders by October 24.

SEPTEMBER 17.

***Birkenhead C.B.**—12 shops at Woodchurch estate. H. J. Rowse (F.), Martins Bank-bldgs., Water-st., Liverpool. Dep. £5 5s.

***Durham County Police Authority.**—Four pairs of police houses at Gilesgate Moor. County A., Court-la., Durham.

Liverpool T.C.—Gymnasium at C. F. Mott Training College, The Hazels, Prescot. City A & Director of Housing. Dep. £2 2s.

SEPTEMBER 19.

Brecon T.C.—30 houses at Penpentre site, Llanfaes. T.C., Municipal Offices. Dep. £2 2s

Ceiriog R.D.C.—Two blocks of 4 flats each and 1 block of 4 houses at Glyn Ceiriog. S., Council Offices, Chirk. Dep. £3 3s.

†***Metropolitan Water Board.**—25 houses with access and service roads at Vicarage-rd., Sunbury-on-Thames. S., Offices of the Board, New River Head, Rosebery-ave., E.C. Dep. £2 2s. Tenders by October 17.

*†**Portland U.D.C.**—78 houses, Verne Common. Clerk.

SEPTEMBER 20.

Rochdale T.C.—Completion of market shops at the Arcade, New Market-bldgs. B.S.

***Skegness U.D.C.**—16 houses at Barnes-rd. estate. E. & S., Town Hall. Dep. £3 3s.

SEPTEMBER 22.

***Tunbridge Wells T.C.**—58 dwellings at Ramsbye estate. B.S. & Waterworks E., Town Hall. Dep. £2 2s.

SEPTEMBER 23.

***Colchester T.C.**—100 houses (two contracts), Shrub End site. J. S. Orchard, B.E., 64, West Stockwell-st. Dep. £2 2s. each contract.

***Swadlincote U.D.C.**—57 houses at Midway estate. E. & S., Council Offices. Dep. £2 2s.

SEPTEMBER 24.

Caernarvonshire E.C.—Kitchen and dining-room at Portmadoc. County A., County Offices, Caernarvon. Dep. £2 2s.

Ilkeston T.C.—44 houses at Kirk Hallam estate. B.E. & S., Town Hall. Dep. £2 2s.

Llandilo R.D.C.—44 houses at 3 sites. Norman E. Evans, M.I.Mun.E., Council Offices. Dep. £2 2s.

***Montgomeryshire E.C.**—Erection of Stage 1 of Bilateral School at Llanfair Caereinion Director of Education, County Ed. Offices, New town. Dep. £2 2s.

SEPTEMBER 26.

Bentley-with-Arksey U.D.C.—40 houses with incidental works. R. N. Penlington, E., Council Offices, Cooke-st., Bentley, nr. Doncaster. Dep. £3 3s.

North of Scotland Hydro-Electric Board.—Superstructure of Lussa Power Station and station attendant's house at Glen Lussa. Gratton & McLean, 113, West Regent-st., Glasgow, C.2. Dep. £5.

SEPTEMBER 28.

***Bridlington T.C.**—49 houses, at Bessingby housing estate. B.E. & S. Dep. £5 5s.

***Guildford R.D.C.**—26 dwellings with inci

dental works at Longacre, Ash. E. & S., Millmead House. Dep. £2 2s.

Guildford R.D.C.—Block of 4 bungalows at Meadowlands, The Street, West Clandon. E. & S., Millmead House. Dep. £2 2s.

SEPTEMBER 30.

†***West Sussex C.C.**—School buildings at Steyning and Rose Green, Bognor Regis. F. R. Steele (F.), County A., Chichester.

OCTOBER 3.

***North-East Metropolitan Regional Hospital Board.**—Additional out-patients' accommodation at King George Hospital, Ilford. Secretary, 11a, Portland-pl., W.1. Dep. £3 3s.

***Peterborough Joint Education Board.**—New premises for Eye C.E. (Controlled Voluntary) School (Infants). J. G. Warwick (F.), 43a, Priestgate, Peterborough. Dep. £2 2s.

OCTOBER 17.

***Peterborough Joint Education Board.**—New premises for Barnack C.E. (Controlled Voluntary) School. Portess & Richardson, chartered architects and surveyors, Lloyds Bank-chbrs., Cathedral Gateway, Peterborough. Dep. £2 2s.

NO DATE.

Halifax C.B.—Erection of houses at Illingworth estate. B.E.

Linslade U.D.C.—32 houses in 3 groups at Soulbury-rd. H. A. Rolls, 15, Bridge-st., Leighton Buzzard. Dep. £2 2s.

Newton Abbot R.D.C.—Four houses at Ryden estate, Kingsteignton. C., Council Offices. Dep. £2 2s.

Wincanton R.D.C.—Contract No. 1. Site works at Balsam Fields estate; Contract 2, erection of 10 houses and 12 flats at same site. R. Earnshaw, Council Offices. Dep. £3 3s. each contract.

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SEPTEMBER 9.

***Luton T.C.**—External redecoration of 66 houses and 108 prefabricated bungalows. B.E. Dep. £2 2s.

SEPTEMBER 14.

Sudbury T.C.—Painting and minor repairs to 85 houses at various sites. B.E. & S.

Sudbury T.C.—Painting and repair of municipal offices and caretaker's house at Belle Vue. B.E. & S.

SEPTEMBER 16.

Chingford T.C.—External decoration of houses. B.E.

SEPTEMBER 19.

***Bedfordshire C.C.**—Heating services at Beaudesert County Primary school, Leighton Buzzard. County A., Bedford.

ROADS, SEWERAGE AND WATER WORKS

SEPTEMBER 8.

***Mitcham T.C.**—Advanced preparation works for Elm Nursery housing estate, London-rd., consisting of 198 flats and 8 aged persons' dwellings. B.E. & S.

SEPTEMBER 10.

†**Cambridge T.C.**—Relaying 24 in. dia. surface-water sewer at East-rd., A.603. B.E. & S. Dep. £3 3s.

SEPTEMBER 13.

Harrow U.D.C.—Roads and sewers at Edgware Golf Course. E. & S., Council Offices. Dep. £2.

Surbiton T.C.—Surface dressing of roads. B.E. & S.

SEPTEMBER 14.

Doncaster C.B.—18 in. dia. spun-iron pumping main from Cantley to Armthorpe-rd. B.S. Dep. £3 3s.

Eston U.D.C.—Roads and sewers at Hampden-st., Site No. 6. E. & S., Normanby-rd., South Bank. Dep. £2 2s.

SEPTEMBER 16.

Deal T.C.—Construction of Great Mongeham sewerage scheme. B.E. & S. Dep. £2 2s.

SEPTEMBER 19.

Atherstone R.D.C.—Roads and sewers, etc., at Mancetter site No. 2. E. & S., Council Offices. Dep. £2 2s.

†**Havant and Waterloo U.D.C.**—Construction of trunk sewers, Contract No. 3. Howard Humphreys & Sons, 17, Victoria-st., S.W.1. Dep. £10 10s.

***Hertford T.C.**—Footpaths at Horns Mill estate, No. 3. B.E. & S., The Castle. Dep £2 2s.

SEPTEMBER 21.

Darlington C.B.—Laying of water mains to McMullen-rd. B.S. & Water E. Dep. £3 3s.

***East Riding C.C.**—Roads, drainage, etc., for 2 schools. County A., County Hall, Beverley. Dep. £2 2s. each.

SEPTEMBER 24.

Tadcaster R.D.C.—Construction of 5,680 lin. yds. of sewers, etc. A. H. S. Waters, M.I.C.E., 25, Temple-row, Birmingham, 2. Dep. £3 3s.

SEPTEMBER 26.

***Bootle C.B.**—Roads and sewers, Sterux-la., Gorsey-la. site. B.E. & S. Dep. £2 2s.

Brentford and Chiswick T.C.—Roads and drainage works at Spencer-rd. site. B.E. & S. Dep. £2 2s.

Sturminster R.D.C.—Construction of Wootton Glanvilles sewerage. Lemon & Blizard, Lansdowne House, Castle-la., Southampton. Dep. £2 2s.

Uxbridge U.D.C.—Roads and sewers at Industrial Estate. E. & S., Council Offices. Dep. £2 2s.

SEPTEMBER 29.

Bullingdon R.D.C. — Sewerage extension scheme at Wheatley. E. & S., Council Offices, 76, Banbury-rd., Oxford. Dep. £5 5s.

OCTOBER 12.

Northallerton and District Water Board.—Construction of Cod Beck reservoir. Clerk to the Board, 72, High-st., North. Dep. £10 10s.

OCTOBER 28.

Zetland C.C.—Construction of mass concrete gravity dam. Blyth & Blyth, MM.I.C.E., 135, George-st., Edinburgh. Dep. £5 5s.

GENERAL BUILDING WORK

(LONDON)

Barnes. — Pumping Station. — Metropolitan Water Board propose erecting a pumping station near riverside reservoirs. Plans by Board's Architect's Department.

Clapham Park.—Flats.—Wandsworth B.C. propose 27 flats on site of 127, King's-ave. Boro' Architect's Dept. preparing plans.

Crofton (Orpington). — Church. — Baptist Church Authorities propose new church at Crofton. Plans submitted by Minister, Baptist Church, High-st., Orpington, Kent.

Elm Park.—Day Nursery.—E.C.C. are to build a day nursery on a site at Diban-ave. Plans by Council's Architects.

Hornchurch.—Treatment Centre.—E.C.C. are to erect an emergency combined treatment centre on land forming part of Grove Farm, Southend-rd. Plans by County Architect's Dept.

Rainham. — Headquarters. — British Legion Authorities propose new headquarters at Upminster-rd.

Streatham.—Flats, etc.—L.C.C. has approved scheme prepared by their own architects for 192 flats, 2 cottages and garages at Streatham Hill. Est. cost, £416,030.

Surbiton.—Flats.—Sidney Clough, F.R.I.B.A., 115, Park-st., W.1, is the architect for 72 flats proposed on Mansfield estate for B.C.

Surbiton.—Houses.—Plans for 68 houses at Gosbury Hill, 14 at Rhodrons-ave. and 46 at Fullers-way are being prepared for B.C. by George B. Imrie, F.R.I.B.A., Little Symors, Clare Hill, Esher, Surrey.

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Surbiton. — Houses. — Clifford Culpin, F.R.I.B.A., 3, Southampton-pl., W.C.1, is preparing plans for 52 houses at Chessington-ct. for B.C.

Upminster. — Classrooms. — Additional classrooms are to be built by E.C.C. at Cedar-ave. Infants' School.

Wandsworth. — Community Centre. — Wandsworth B.C. are considering proposal to erect a community centre on Coventry Hall housing site.

West Ham.—Houses.—B.C. propose 62 houses on site at Wightman-st. for which plans are being prepared by Architect's Dept.

(PROVINCIAL)

Alcester.—R.D.C. propose additional 34 houses. Plans by Francis B. Andrews & Son, 95, Colmore-row, Birmingham.

Alnwick.—R.D.C. received sanction to build 40 houses. Architects, Reavell and Cahill, Lloyds Bank-chbrs., Alnwick.

Ashton-in-Makerfield.—U.D.C. to seek M.O.H. permission for further 50 houses at Bryn Station site.

Ashton-under-Lyne.—B.C. approved layout plan for 53 houses at Crowhill at £75,615.

Batley.—T.C. approved plans for: Alterations to rag-grinding department at Ings Mill, Bradford-rd. for Henry Burrows, Ltd.; scouring shed and finished yarn warehouse at Wheatcroft Mills, Batley Carr, for T. Smith & Son (Dewsbury), Ltd.; loading dock at Britannia Mills, Gelderd-rd., for G. Hirst & Son; alterations to warehouse at Springwell Mills, Batley Carr, for John Fenton & David Bradley Mills, Ltd.; dutch barn at Popeley Farm, Birstall, for S. Smith, and machine shed at Anchor Mills, Bradford, for J. Pyrah & Co., Ltd.

Belper.—M.O.W. propose telephone exchange at Lea.

Birmingham.—T.C. propose new estate at Bartley Green, providing for 340 dwellings, health centre, church, library and other amenities. H. J. Manzoni, E. & S.

Birmingham.—E.C. propose primary school at Turves Green (£99,500); boys' secondary modern school at Turves Green (£180,000); practical rooms block at Colmers Farm (£41,000); canteens at Colmers Farm (£10,385) and at Turves Green (£27,550). H. J. Manzoni, E. & S.

Bolton.—T.C. propose adapting premises at Castle-st. as social centre for the blind, and portion of Smithills Hall as hostel for aged.—Approved plans for 30 houses at Lever Edge-la.; alterations at Lever Bridge Mills, Radcliffe-rd., for Chloride Electrical Storage Co., Ltd.; canteen extensions and alterations to mill at Gaskell-st. for Park Spinning Co., Ltd.; alterations at 32-36, Deansgate, for Littlewoods Mail Order Stores, Ltd., and dining-room and kitchen off Pilkington-st. for E.C.

Bolton.—Astley Bridge District Committee approved plans for 8 houses at Stonyhurst for F. M. Douglas.—T.C. propose new destructor works at Raikes-la., providing for 50-vehicle garage, workshop, stores and messrooms.—E.C. propose additional classrooms at 4 schools at £7,100; extension of assembly hall and erection of kitchen at Devonshire-rd. County Primary School; kitchen and dining-room at Top O' Th' Brow Primary School; extensions to St. Columbus R.C. Primary School and erection in 1950 of Breightmet County Primary School.

Bredbury and Romiley.—U.D.C. approved plans for new canteen at Highfield Modern Secondary School.

Bury.—E.C. propose new schools at Elton, Hardmans-in-Fields, Fairfield and Walmersley. Boro' E., John Chadwick, A.M.I.C.E.

Cheshire.—C.C. considering erection of fire station at Thomas-st., Macclesfield. County A., Mainwaring Parkes, F.R.I.B.A.

Chesterfield.—T.C. to acquire land for extending Grangewood-rd. housing site. W. S. Wilson, M.I.Mun.E., Boro' S.

Coventry.—T.C. plan self-service laundries on new housing estates. Donald E. E. Hibson, City A.

Failsworth.—U.D.C. approved plans for canteen at Wrigley Head Mill.

Gateshead.—Sites being considered by T.C. for further houses at Easthill-rd. and Sunderland-rd. (7 houses); Hillcrest estate (26); Southend-rd. and Windy Nook-rd. (54 houses and 6 flats); Coach-rd. estate (40 houses); Coach-rd. nr. Elmwood-gdns. (4); Alwinton-gdns. (8); Fieldhouse estate (10, houses, Huxley-cres.); Barry-st. (23 houses); Coniston-gdns. (34); Saltwell-rd. (18); Bankey Fields (94). Plans by Council's Chief Architect (H. J. Cook), Municipal-bldgs., Swinburne-st., Gateshead. Thomas Wilson Working Men's Club are planning rebuilding of their premises.—Gateshead Wing A.T.C. are seeking site for new premises.—Plans have been approved for two wards block at Sheriff Hill Infectious Diseases Hospital for Management Committee.—J. Rowell & Son, Back High-st., propose brewery extensions.—

Wright Anderson & Co., Ltd., constructional engineers, to extend drawing and tracing offices in Coulthards-la.—The Redheugh Sheet Iron Works to build new erection department store at The Teams.—M.H. approved T.C.'s estimate of £27,927 for 22 houses on Lyndhurst estate.

Gateshead.—T.C. considering scheme for additions to Central Library costing £17,000. H. J Cook, Chief Architect.

Halesowen.—T.C. propose flats at Kent-rd., Lapal.

Haltwhistle.—Preliminary plans have been prepared for R.D.C. for about 150 houses near Comb Hill site.

Horncastle.—Layout plans for 4 bungalows and 6 pairs of houses at Tattershall and 5 pairs of houses and 2 pairs of bungalows at Wragby were approved by R.D.C.

Leeds.—Regional Hospital Board propose extensions to Batley Hospital.

Llandwrog.—Forall Products, Ltd., St. Helens-rd., Caernarvon, have acquired W.A.A.F. site for factory purposes.

Manchester. — Ferranti, Ltd., Hollinwood Works, Failsworth, Manchester, propose erection of factory at Wythenshawe Industrial estate.

Manchester.—3 new R.C. schools proposed at Baguley Hall, Newall Green and Wythenshawe district by Salford Diocese.

Newcastle-on-Tyne.—E.C. considering provision of new clinic, Atkinson-rd., extending Middle-st. clinic and alterations to Raby-st. clinic. Plans by City Architect (Education Section), 31, Northumberland-rd., Newcastle-on-Tyne.

Newcastle-on-Tyne.—Spence & Price, St. Mary's-pl., Newcastle-on-Tyne, have been appointed architects by Newcastle Hospital Board for converting Smallpox Hospital on Town Moor into plastic surgery unit.

Newport.—Howden R.D.C. seeking M.H. approval to acquire 3½ acres for housing.

Northumberland.—E.C. planning erection of £250,000 technical college at Ashington; school at Morpeth for the partially sighted at £25,000 and school at Morpeth for subnormal children at £40,000. Sites are to be acquired for new schools at Newburn, Seaton Burn, Dinnington, Bedlington and Wallsend.

Otley.—Draft plans for houses on second scheme of Weston-la. estate are in course of preparation.

Radcliffe.—B.C. approved plans for: Loading bay at Dumers-la. for J. Spencer, Ashworth, and extensions, Wellington Mills, Milltown-st., for J. Bentley & Sons.

Reeth.—R.D.C. proposes 6 houses at Reeth and 2 at Low Row.

Rochdale.—District Hospital Management Comm. propose additional storey to existing maternity block at £53,405; extensions to nurses' home (£46,225); new central admission and services block (£55,000) and modernising of "H" block (£14,200), all at Birch Hill Hospital.

Ryde (Isle of Wight).—Council seek £25,000 loan for new bathing station, shops, etc., on corner of Quay-rd.

Salop.—C.C. propose technical college at Oswestry at £400,000 and new block at Oakengates at £100,000. A. G. Chant, County A.

Scarborough. — John Smith's Tadcaster Brewery Co., Ltd., asked T.C. to reserve site on Barrowcliff estate for licensed premises.—Baker & Clark, York-pl., Scarborough, are architects for office alterations, North-pl., for Scarborough and Whitby Breweries, Ltd., and additions to the Castle Works for Plaxtons (Scarborough), Ltd.

Scarisbrick.—R.C. Authorities propose new school.

Shrewsbury.—T.C. propose further 234 houses. Plans by F. R. Dennis, Boro' S.

Stoke-on-Trent.—E.C. to seek following loans: £350,000 for secondary grammar school at Bucknall, £115,000 for primary school at Norton, £96,000 for 12 nurseries, £15,000 for extensions to Burslem Art School, £15,000 for additional accommodation at Chell Secondary Modern School and £15,000 for adaptations to Westwood Manor.

Sunderland.—Twiggs (Northern), Ltd., pram manufacturers, Pallion Trading Estate, and Kings (Sunderland), Ltd., clothiers, Pallion Estate, are seeking sanction to carry out factory extensions.

Tynemouth.—Morpeth R.D.C. to build 36 houses. Architects, Mauchlen & Weightman, 12, Saville-row, Newcastle.

Wallsend.—E. M. Lawson, Barras-bldgs., Barras Bridge, Newcastle-on-Tyne, is architect for proposed cinema, shops, etc., on Coast-rd., nr. King's-rd., for North-Eastern Cinemas De Luxe, Ltd., Carlton Cinema, Tynemouth.

Wallsend.—Plans are under consideration for erection by William Leech, Ltd., builders, 2, Clayton-st., Newcastle-on-Tyne, of 13 shops and flats, Exeter-rd. and Mullen-rd., Wallsend.

Warrington.—E.C. propose new school at Long-la.; extensions at Orford C. of E. School; new school at Dallam Farm estate; girls' high school and R.C. secondary school at Latchford. J. Y. Hughes, A.M.I.C.E., Boro' E.

West Bromwich.—T.C. propose 9 shops and 5 flats. Plans by H. Schofield, Boro' E.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government Departments*.

Ashbourne.—Houses at various sites, for R.D.C. S., Compton Offices, Ashbourne: G. A. M. Hall, Ltd., Derby. Ballidon, £5,992; Parwich, £8,960; Hartington, £11,995; Biggin, £10,400.

Barnsley.—Kitchen and dining-room at Barnsley grammar school, for T.C.: *V. Dunk, Ltd., Summer-la., Barnsley, £6,735.

Belfast.—Drill-halls and housecraft rooms at city Intermediate Schools, for E.C. Edenderry School: *W. J. Rodgers, Belfast, £4,265; Mountcollyer School: *W. J. Rodgers, £4,674; Glenwood School: *F. & W. Bell, £4,674; Park Parade School: F. & W. Bell, £4,439; Linfield School: *F. & W. Bell, £4,264; Graymount Intermediate School: *Orlit (N. I.), Ltd., Belfast, £5,653.

Belper.—Houses, for R.D.C.: 32 at Holbrook, *J. Millward & Sons, Market-pl., Belper, £40,276; 14 at Horsley, Woodhouse, *Harris Bros. (Marehay), Ltd., Derby-rd., Marehay, £17,418; 4 at Lea, *Pidcock & Beastall, Alfreton.

Billingham-on-Tees.—Baptist Sunday School at Cheviot-cres. Architects, Bell & Bell, West Hartlepool: *Moorhouse & Barker, Thornaby-on-Tees, £3,750.

Boston (Lincs).—4 houses at Church-rd., for T.C.: *Wm. Wright & Son (Lincoln), Ltd.

Cheadle.—Houses for R.D.C. 16 at Cronny Bank, Cheddleton: *W. Brammar & Co., Hartshill, Newcastle, £21,198; four at Church-la., Ipstones: *J. A. Bailey, Tape-st., Cheadle, £5,188.

Darlington.—Erection of Eastbourne Primary School, for E.C. E. A. Tornbohm, Boro' A., Central-bldgs.: *E. Lawson, Ltd., 10, Woodlands-rd., Darlington.

Felling-on-Tyne.—Conversion of wards at Windy Nook Isolation Hospital into training school for nurses, for Newcastle Regional Hospital Board. Board's Planning Architect, P. H. Knighton: *J. & W. Lowery, Corporation-st., Newcastle-on-Tyne.

Gateshead.—Conversion of "Old Rectory," Sheriff Hill into seven flats: *J. G. Spotswood, Ltd., Heaton-rd., Newcastle-on-Tyne.

Grantham.—58 houses at site No. 4 at Harroby-la., for T.C. G. H. Dickinson (L.), Housing A., Guildhall. Quantities by K. H. Bole, A.R.I.C.S.: *W. Foster & Sons, 41, Castlegate, Grantham, £76,130.

Holywell.—Dining-room and kitchen at Grammar School, for Flintshire C.C.: *T. J. Williams, Caerwys, Flintshire.

L.C.C.—Contracts exceeding £2,500 in value placed by L.C.C. during period ending August 30. Erection of 285 dwellings at Oxhey, Hertfordshire. W. J. Simms, Sons & Cooke, Ltd.; reinstatement and improvements at Kingsgate-rd. Special School, Hampstead, James Shockell & Co., Ltd.; construction of superstructure of block of dwellings, laundry and 28 perambulator sheds at Broadway Estate, Hackney, George Parker & Sons, Ltd.

¶London (Admiralty). — *Portsmouth*, H.M. Dockyard, Resurfacing of road at R.N. Barracks, etc., Allweather Mechanical Grouting Co., Ltd., 47, Victoria-st., London, S.W.1.

¶London (Admiralty).—R.N. W/T Station, New Waltham, painting of steel towers, S. & F. Contracting Co., Ltd., Rodgers-chbrs., 63, Norfolk-st., Sheffield 1.

¶London (Air Ministry).—Contracts to value of £500 or over for week ended August 20:—
Building work: Jellings Builders, Ltd., Peterborough.
General maintenance work: E. A. Dean, Islay, Argyle.
Resurfacing roads: Scottish Tarmacadam & Asphalt Co., Ltd., Glasgow, C.5.
Erection of hutting: W. S. Try, Ltd., Uxbridge, Middx.
Sealing joints—runways: Geo. Wimpey & Co., Ltd., London, W.12.
External rendering: F. & J. Pilling (Bros.), Ltd., Manchester 13.
Hot-water installation: William Freer, Ltd., London, W.C.1; Z. D. Berry & Sons, Ltd., London, S.W.1.
Electrical work: Alpha Manufacturing & Elec. Co., Ltd., London, S.W.4.

¶London (Air Ministry).—Contracts to value of £500 or over for week ended August 27. *Building work*: Neodox, Ltd., Manchester, 2. *Civil engineering work*: Fitzpatrick & Son (Contractors), Ltd., London, E.3. *Painting work*: C. and T. Painters, Ltd., Harlesden, N.W.10. *Heating and hot water installation*: Deane & Beal, Ltd., London, E.C.4; William Freer, Ltd., London, W.C.1.

¶London (M.O.W.).—Contracts placed by M.O.W. for week ended August 20:—
London: Belgrave House, King's Cross, Alteration and adaptations, Marshall Andrew & Co., Ltd., 31, Queen Anne's-gate, St. James Park, S.W.1. *Beds*: College of Aeronautics, Cranfield, New blower rig test house, H. C. Janes, Ltd., 183, High Town-rd., Luton. *Bucks*: H.P.O., High Wycombe, Temporary welfare accommodation, Geo. Biggs & Sons, Great Kingshill, High Wycombe, Bucks. *Cardiganshire*: Lampeter, Temporary office building, John Morgan (Builders), Ltd., Northumberland Lodge, Cathedral-rd., Cardiff. *Essex*: Colchester, Married Quarters for Officers, Hutton (Builders), Ltd., Birch, Colchester; Tilbury Telephone Exchange, Extensions and alterations, Hammond & Miles, Ltd., Scrapton-rd. Works, Ilford. *Gloucs*: C.E. School, Wootton-under-Edge, Temporary school buildings, Holborrow & Sons, Ltd., Market-pl., Tetbury, Glos. *Hampshire*: N.G.T.E., Pyestock, Office block, Lavender McMillan, Ltd., 54, Cheam Common-rd., Worcester Park. *Lancs*: Telephone Manager's Office, Derby-st., Liverpool, Alterations and new works, Humphreys, Ltd., H.22, Exchange-bldgs., Liverpool. *Yorks*: Ranmoor Telephone Exchange, Sheffield, Erection, Frank Robson, Ltd., 48, Riverdale-rd., Sheffield; Ministry of Supply, Storage Depot, Thorp Arch, Internal and external painting, Sorrell (York), Ltd., Hildreth House, 95, Howarth Village, York; Stamford Bridge County Primary School, School kitchen and dining-room, A. Moor & Son, Spring Hill-rd., Scarborough. *Zetlandshire*: Mid Yell Public School, Kitchen, and dining-room, Chisholme Decorators, Ltd., 701, Sauchiehall-st., Glasgow.

¶London (War Dept.).—Contracts placed by War Dept. for week ended August 20:—
Dorset: Road work, W. & J. Glossop, Ltd., Exeter. *Hants*: Building work, R. C. Radford, Farnham. *Surrey*: Miscellaneous work, R. C. Radford, Farnham. *Berks*: Miscellaneous work, R. E. Spooner, Ltd., Ashford, Middx. *Glos*: Miscellaneous work, T. C. Savage, Stroud. *Wilts*: Road work, Roads Reconstruction (1934), Ltd., Frome. *Orkney Islands*: Miscellaneous work, Orkney Builders, Ltd., Kirkwall. *Leicester*: Miscellaneous work, H. H. Carlich, Market Harborough. *Derby*: Painting work, Thomas Cotton, Ltd., Mansfield.

Morecambe.—14 houses at Warton-av., for T.C.: *Thos. Holroyd, Ennerdale, Trumacar-la., Heysham.

Newport Pagnell.—12 houses at Sherrington and two pairs at Lathbury for R.D.C. K. Travis (L.), Architect to R.D.C., 7, Station-rd. Quantities by E. Howard, Northampton. Sherington: *W. Crouch, Weston Hill, Olney, Bucks, £14,216; Lathbury: *H. W. Mason & Sons, Silver-st., Newport Pagnell, Bucks, £4,638.

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Penge.—86 flats at Croydon, for U.D.C. Harold W. Moore* (F.), Sheraton House, 14-19, Great Chapel-st., W.1. Quantities by Spriggs & Partners, 177, Brompton-rd., S.W.3:—

The Bunting Construction Co., Ltd., S.W.2 ... ... £179,691
E. H. Smith (Croydon), Ltd., Croydon 175,183
C. F. Kearley, Ltd., W.4 174,360
J. Jarvis & Sons, Ltd., S.W.1 171,595
Walter Smith (Public Works), Ltd., Sevenoaks, Kent 171,229
Frank Bilton (London), Ltd., S.W.2 ... 168,235
M. J. Gleeson, Ltd., Cheam 167,632
Joseph Cartwright, Ltd., S.W.4 166,432
L. F. Richardson, Ltd., Chichester ... 157,664
*Unera Construction Co., Ltd., 386, Kensington High-st. 152,329

Portsmouth.—44 dwellings at Leigh Park, for T.C. F. Mellor (F.), City A., Portsmouth:—
Cortis & Hankins, Ltd., nr. Farlington £66,848
H. Jones & Son, Southsea 66,079
Warings, Ltd., Portsmouth 65,141
Healy & Evans, Southsea 65,074
H. E. Collins, Ltd., Farlington 63,857
Faulkners, Waterlooville 63,135
*J. C. Nicholls, 55, Carmarthen-av., Cosham 62,920

Redcar.—40 houses at Dales estate, for T.C. R. Hilton, engineer, Ridley House, Redcar: *W. A. King & Sons, Westbourne-gr., North Ormesby, Middlesbrough, £51,469.

Rutherglen.—16 double villas at The East Kilbride-rd., Burnside, for Lanarkshire C.C. Samuel MacColl, architect, County-bldgs., Beckford-st., Hamilton: *Orlit, Ltd., 62, Old Daharnock-rd., Bridgeton, Glasgow.

Scarborough.—100-120 houses at Eastfield, Seamer, for T.C. H. V. Overfield, B.E.: *Mollekin Bros., Scarborough (negotiated price approved by M.H.).

Seaton Delaval.—Alterations and adaptations at colliery canteen: *R. Bowey & Son, Ltd., 190, Back Raby-st., Newcastle.

Skipton.—Four houses at Cowling, for R.D.C.: *T. H. Metcalfe, Skipton, £5,464.

Staffs.—Alterations at Bilston College of Further Education, for C.C. A. C. H. Stillman (F.), Architect & S., County Ed. Offices, Earl-st., Stafford. Quantities by Henry Vale & Sons, 21, Waterloo-rd., Wolverhampton: *R. Halleti & Sons, Ltd., Manby-st., Wolverhampton, £1,835.

States of Guernsey.—New States Dairy at Bailiff's Cross. G. Heggs, States Engineer, States Office: *Sewell & Richardson, Ellson Works, Railway-pl., Wimbledon, London, S.W.19.

States of Guernsey.—18 houses at Clos Landais, St. Saviour's. G. Heggs, States E., States Office: *Cranwell Construction Co., Ltd., Thornycroft House, Smith-sq., London, S.W.1.

States of Guernsey.—18 houses at Baubigny, St. Sampson's. G. Heggs, States E., States Office: *W. E. Hammond, 89, Village-rd., Gosport, Hants.

Stoke-on-Trent.—Houses for T.C. 62 at Springfields, Trent Vale site: *Direct Labour, £87,033; 14 at Riverside-rd., *J. Kelly, £20,864; 12 at Stonor-st., Cobridge: *J. E. Homer & Co., Newcastle, Staffs, £16,426; 10 at Riverside-rd.: *H. W. Cartlidge, Ltd., £13,265; two at Sutherland-rd., Hundford: *Morgan Building Co., Ltd., £2,655; six at Hollybush Farm, Fenton: *W. Ball & Sons, Ltd., £7,657; 14 at Riverside-rd.: *Morgan Building Co., Ltd., £19,274; six at Townsend, Bucknall (site 2): *A. Hughes, Shepton, £7,699.

Strathaven.—New Catholic school for Lanarkshire C.C. William Watt, architect, Albert-rd., Motherwell-Wishaw: *Orlit, Ltd., 79, George-st., Edinburgh.

Sunderland.—Dining-room and kitchen at Hylton-rd. School: *Randle & Co., Ltd., Back Dunelin-st., Sunderland.

Sunderland.—Light industrial factory at Pallion Trading estate, for North-Eastern Trading Estates, Ltd. Architects, S. J. Stephenson & Gillis, Saville-chbrs., North-st., Newcastle-on-Tyne: *H. E. Pitt, Ltd., Leopold-st., Millfield, Sunderland.

Walsall.—Eight houses for B.C.: *Brown & Sabine, Ltd., Oldbury.

Wores.—Adaptations to Swinford Old Hall for conversion to hostel for aged: *A. H. Guest, Ltd., Stourbridge.

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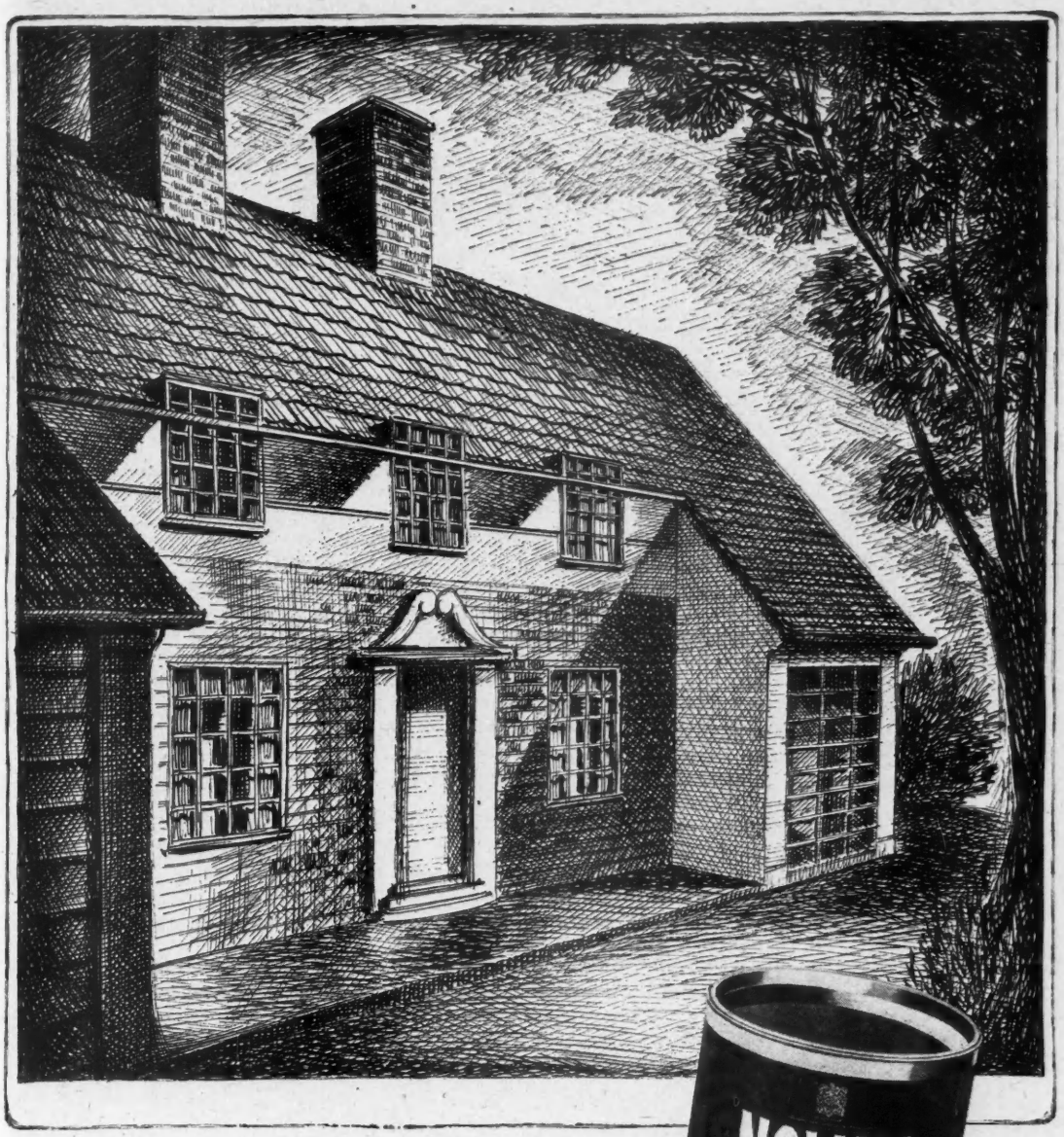

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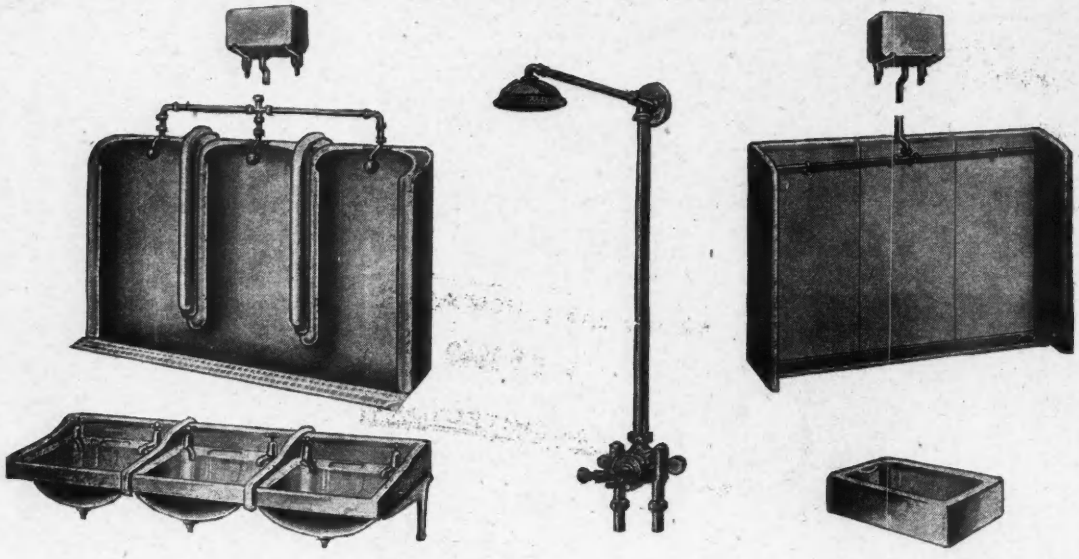

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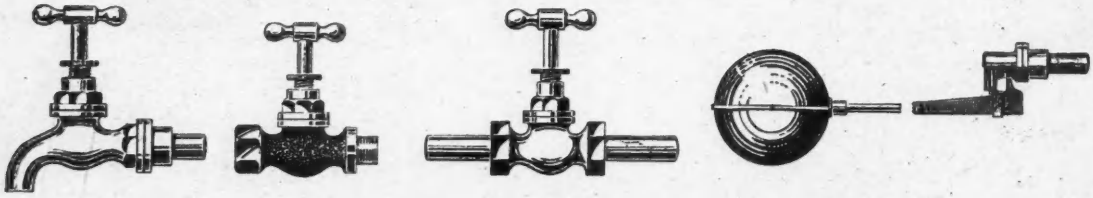

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London, England: Published by THE BUILDER LIMITED, at The Builder House, Catherine-st., Aldwych, W.C.2, and printed by PRESS PRINTERS LTD., 93, Long Acre, W.C.2, Sept. 2, 1949
REGISTERED AT THE GENERAL POST OFFICE AS A NEWSPAPER.

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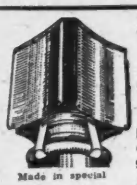
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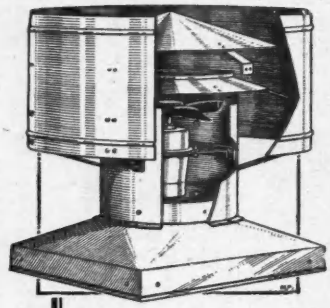

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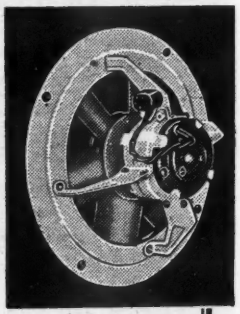

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